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Cruelty to Animals.*

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The methods of slaughtering animals for food purposes have strewn the face of the earth with bones of contention in recent years. On the one side we have the masses of laymen with their inexperience and superficial notions, and opposed to these is the thin red line of slaughtermen, meat traders, and scientists, backed up by practical experience and knowledge and by proven facts. All credit must be given to the laymen for their excellent intentions and their efforts to lighten the lot of the beast about to die for the purpose of providing us with food, but they should not regard those who oppose them as being devoid of any traces of humanitarian principles. So long as animals are slaughtered for human food the process, even under the most ideal conditions, will always be accompanied by a certain degree of suffering and pain. Strictly speaking, there is no such thing, and never will be, as "humane slaughtering." The two words in conjunction are an absurdity. The humane destruction of animals not intended for food purposes—euthanasia—may be readily and simply accomplished, but the methods employed in such cases are useless to the butcher. The expression "humane killer" applied to instruments used in slaughtering is a misnomer which is responsible for the fanatical enthusiasm of a large band of thoughtless advocates who are attracted by the word "humane." If the proper name "mechanical killer" were more widely known, this extravagant advocacy would die a natural death. Moreover, the misnomer carries the implication that those who oppose the use of the so-called "humane killer" are inhumane.

The one outstanding fact of slaughtering which has remained undisputed is that the animal to be used for flesh food *must* have its throat cut. So it was in the days of Mahomet and of Moses, and after all these thousands of years we have not arrived at any other means of draining the body of blood. In these days of progress no flight of imagination may safely be called absurd, and maybe the time will come when some other method of ridding meat of fluid will be found, that is, if the future generations do not abandon naturally-produced meat in favour of some little pellets of synthetic food having all the values and virtues of a good porterhouse steak (or, according to the latest prophecies, derive all energy direct from the sun). But meanwhile throat-cutting is the one established fact of slaughtering. The controversy is as to whether it be necessary to stun the animal first, and if so, the best method of bringing about this state of unconsciousness.

Since food production is a commercial proposition, the method of killing must not be considered alone, but in conjunction with the production of first-class meat; and in this country religious considerations are a complication of the question. The quality of the meat depends on the rapidity and the completeness of the draining of the blood and lymph from the carcass. A carcass which bleeds slowly will not be thoroughly drained; therefore, any method of slaughter which decreases the rate of bleeding is sure to have its opponents. The activities of the organisms which bring about the processes of putrefaction and decomposition are in direct proportion to the amount of moisture present in the body, and are further influenced by the temperature of the meat, and in this climate these questions of rapidity of bleeding and consequent keeping qualities assume far greater importance than in temperate regions. There are, then, two outstanding features which must be kept constantly in mind when considering the slaughter of animals for food; firstly—their order is not by chance—the animal must be killed in such a way as to avoid all unnecessary pain to the beast, and secondly, in such a way as to produce a carcass thoroughly drained of blood.

Man's ingenuity has produced an innumerable variety of methods of encompassing instantaneous death. Such a death is far from desirable in the case of the meat-producing animals: instantaneous unconsciousness is what

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is required. There are many contrivances used for suddenly stunning an animal. Each one has its own advocates and its own opponents, but the majority of those whose opinion is of value seem to agree that in the case of cattle the old-fashioned pole-axe is by far the most satisfactory—when wielded by an expert.

The relative merits of methods of stunning may be left aside for a moment while considering the routine of slaughtering cattle in Malaya. This is carried out according to the Mohammedan rites, as follows: the animal is cast on the near side; the head is drawn backwards, thus exposing and stretching the region of the throat; a knife is drawn across the throat, severing, in one sweep, all the tissues and vessels, and the animal is allowed to bleed to death. The bleeding is rapid and thorough to a degree which cannot be improved. Is the actual procedure unnecessarily cruel when compared with other methods of slaughter? Is it more cruel to such a degree that it be desirable to make an attempt to supplant the religious practices of ages? The Mohammedan method is analogous to the Jewish Schechita, which has been described as " the oldest method of human slaughtering "; but even Shechita has its opponents and has been the subject of a number of lively discussions.

In order to have a clear conception of what happens when an animal is slaughtered it is necessary to consider for a moment the functions of the central nervous system. This may conveniently be dealt with in four parts:—(i) The cerebrum, two globe-like masses of brain tissue placed immediately behind the frontal bone or forehead. Here are situated the centres having to do with all impressions—pleasure, pain, fright, anger and suchlike—the sensations are passed to the cerebrum and there recorded. When an animal is stunned by a blow on the forehead all these underlying centres are immediately put out of action by the concussion; the animal becomes insensitive—unconscious. Any sudden interference with the blood supply to the brain will likewise cause the cerebrum to cease to function. (ii) The cerebellum is not of particular interest, in so far as this subject is concerned. (iii) The medulla contains the nervous centres which control such important functions as the respiration, the circulation, and the action of the heart, and no matter by what method an animal be slaughtered, interference with this portion of the brain influences the efficiency and the completeness of the bleeding. (iv) The spinal cord contains chains of centres for reflex actions—acts which are carried out without any assistance from the brain.

Reflex actions are often misunderstood by the layman and are trotted out as evidence of painful sensations, but the nervous chain known as a " reflex arc " has nothing whatever to do with consciousness. At the risk of running foul of our anti-vivisectionists, reference to an old experiment will illustrate the fact. A frog with its brain removed is capable of carrying out the most complex reflex acts. If placed in water it will swim; if it be stroked, it croaks; if placed on its back it recovers its natural position. If placed on a board which is slowly brought from the horizontal to the vertical position, the animal gradually crawls up and, when the board is vertical, sits at the top. It is difficult to convince the layman that these actions of the decerebrated frog are not of a conscious nature. The evolutions of a decapitated chicken or duck are notorious, but the consciousness of the bird has been destroyed. The reflex acts exhibited by the higher animals are more complex than those of the lower, for they are normally controlled or modified by cerebral centres. There are movements which may be excited in the limbs after death in both horse and ox, particularly in the latter, which resemble those of the reflex frog. If, immediately after a horse has been destroyed, an attempt be made to open the abdomen, the animal kicks. Some minutes must be allowed to elapse before the irritability of the cord disappears. In the ox the period is longer and even after decapitation the apparently purposeful movements are very remarkable.

The sequence of events which occurs when an ox is slaughtered by the Mohammedan method is as follows:—The throat is severed with one stroke of an exceedingly keen knife, usually about fourteen inches in length. The sudden rush of blood from the opened vessels produces an instant fall in blood-pressure and anæmia of the brain. This is accompanied by (not followed by) the abolition of consciousness. It has been shown by physiologists that after throat-cutting, the great brain—the seat of consciousness—ceases to function at once, then the mid-brain, next the spinal bulb, and finally the centres of the spinal cord. The lower parts of the nervous system (the spinal bulb and the spinal cord) continue to function for a time; consequently, breathing and convulsive or reflex movements are seen for some minutes after unconsciousness has been accomplished. Tracing deeper the effects of the retarded death of the lower nervous system, we find that the reflex kicking and struggling, together with the deep respiratory movements, press all the blood out of the muscles and abdominal organs into the larger veins. Lymph pours into the vessels from the tissues, and the whole is poured out *via* the jugular vein. Further, the vaso-motor centre in the spinal bulb not only continues to function but is stimulated by the fall in blood pressure, and causes constriction of arteries all over the body, the action of the heart is accelerated and peristaltic movements of the bowels help to force out the blood. The animal meanwhile passes gradually from deep unconsciousness to absolute physiological death. The accumulated results of all these processes produce a carcass pumped practically dry of blood and lymph, that is, a carcass of good, firm, flesh having the best possible " keeping qualities "—which is what is required, not only by the butcher, but by all the people who enjoy eating a prime cut of meat.

As to the pain experienced in the actual cutting, Professor Leonard Hill, Director of the Department of Applied Physiology, National Institute of Medical Research, in *The Lancet* of December 23rd, 1923, in defending the Jewish method of slaughter, endeavours to show that, when properly and expeditiously carried out, the actual cut across the throat is not felt by the animal. After producing a number of arguments (which were later dealt with by Professor R. G. Linton in the *Veterinary Record* of April 19th, 1924) Professor Hill states:—" Two facts are, then, indisputably established (1) that a big injury, such as throat cutting, is not felt at the moment of infliction; (2) that the cutting of the big arteries in the throat instantly arrests the circulation in the great brain and establishes unconsciousness." It is of interest to note that, in the case of human beings, Mr. T. H. Openshaw, a London surgeon,

states that several cases of throat cutting which, surviving from their injuries had come under his care in the London Hospital, were questioned by him and not one of these had felt the cut when it was made.

Sir Leonard Hill's two facts are not indisputably established. Here in Malaya, where cattle are slaughtered in accordance with the Mohammedan rites, anybody interested may observe an unlimited number of cases and come to his own conclusions with regard to fact number one. As soon as the knife touches and is drawn across the throat, the animal makes a slight struggle. This convulsion at the moment of incision—momentary though it be—is evidence of pain; and since the subjective reaction to pain on the part of animals is not completely revealed to us, but must remain a matter for speculation, it is not possible for us to say definitely of what degree of pain. Probably the degree of pain and the duration thereof are in inverse proportion to the keenness of the knife and the skill of the operator, and, under the best of conditions, would be almost negligible in both respects.

As to the rapidity of the loss of consciousness, most physiologists agree that it is instantaneous once the vessels have been severed. Those who argue against the word " instantaneous " speak their contradictions in terms of seconds, or even split seconds. Mr. Thomas Parker, F.R.C.V.S., Veterinary Officer for Newcastle-upon-Tyne, in an article on slaughtering published in the *Veterinary Journal* of May, 1929, states:—" Now it has been computed that the blood may circulate through the carotid artery at the rate of about a foot per second and that when such a vessel has been opened it may escape at a speed of from five to ten times as great. It is conceivable, therefore, that the time occupied in the onset of unconsciousness in an animal bled without previous stunning will be more or less controlled by the quickness and completeness with which the operation of severing the large blood vessels in the region of the throat is performed. For the latter reason, slaughtering by bleeding without previous stunning, whether by the Jewish or any other method, should not be permitted unless the method and instruments are such that the vessels and adjoining tissues can be completely severed almost instantaneously," and also "Again, bleeding by the Jewish method, or the ordinary method of sheep sticking, is rapidly followed by unconsciousness, because of interference with the regular flow of blood through the vascular system, without which the brain ceases to function." He goes on to say that no matter how near the state of perfection the slaughterman may have arrived in the art of cutting or sticking, the infliction of a certain amount of pain, even if only momentarily, will be inevitable from time to time where slaughtering without previous stunning is carried out. But surely the above remark applies to every and any method of slaughtering: the pole-axe occasionally misses the mark; from time to time the mechanical killer is badly directed and applied or improperly charged; now and again the stunning hammer does not do its work at the first blow. Having carried out a series of investigations into the blood supply of the brain and the effects thereon of throat cutting, Professor A. V. Sahlstedt, Principal of the Veterinary Institute, Stockholm, has arrived at the conclusion that " in normal procedure, the Jewish method of slaughtering is probably rapidly followed by loss of consciousness and that, consequently, this method cannot be said to be attended by ' cruelty ' to the cattle." His investigations concerned chiefly the collateral supply of blood to the brain, that is, *via* the vertebral arteries, which normally amounts to one-fifth or one-sixth of that organ's total blood supply. He cautiously puts forward the suggestion that after the first rush of blood has brought unconsciousness there might be a re-establishment of blood pressure in the brain sufficient to restore consciousness. One of our local newspapers, in a leading article entitled "Abattoir Reform," in an attempt apparently to refer to the above work, recently published the following remarkable and curiously-phrased information:—"A curious instance of the combination of the two methods comes from Sweden, where a commission decided that the Jewish method of slaughter was too cruel to be permitted, because although unconsciousness intervened swiftly, after the throat cutting it also returned swiftly, and that commission made the curious recommendation that the animal should be shot after the knife was used." However, this remote possibility of the return of consciousness is of no practical interest here, for by the Mohammedan method of killing, the head is completely severed from the body after about 50 per cent. or 60 per cent. of the total amount of blood which runs away has been carried off; that is, in about 45 to 60 seconds. The Jewish method of slaughter has been prohibited in Sweden and also in Switzerland, but in Great Britain, America, Germany and other highly civilised countries it is still permitted. It is rather surprising to learn that about 80 per cent. of the fresh meat (excluding pork) consumed in and about London is prepared by the Jewish method.

Now with regard to the religious aspect. The practice of this method of slaughtering appears to extend backwards beyond the time of Mahomet to the days of Moses, and although no authoritative reference is made to it in the Pentateuch, it is one of the oldest established laws of the Talmud. It is also one of the firmest principles of the Mohammedan religion. The underlying idea was that no flesh should be used for human food unless the source of that flesh were alive and in good condition up to the very instant when it started to bleed to death. (In the Jewish rite the slightest pause in the making of the stroke, or even a notch found subsequently on the blade of the knife, renders the entire carcass unclean and not prepared in accordance with the law.) Thus any preliminary stunning violates the sacred law. The old laws anent bleeding were a wise precaution in the days when the principles of hygiene and of sanitation were but rudimentary instincts, and in countries where the heat had an extremely unwholesome effect on dead meat and on carcasses from which the blood had not been quickly and freely drained. The strict observance of these laws must have saved many an ancient abdomen from hours of agony. It is not contended that in these days of chilling-rooms, potent anti-spasmodics and widespread knowledge of the rules of health, strict observance of the ancient law is essential from the point of view of the well-being of the consumer (though perhaps it is still beneficial in the more remote districts). The laws have served their purpose in this respect in the past couple of thousand years, but during the process they have become firm religious principles and the hall-mark of a Faith. All

religions cherish these useless vestiges of days that are dead. There is little enough religion at the present time, and it is not for us to attempt to interfere with what survives. But this is by the way; the question should not be studied as a political or a religious one but as one that must be answered from the point of view of humaneness and justice to animals. In March, 1892, the Kingdom of Saxony prescribed that stunning must precede the bleeding in all cases of slaughter. In disallowing a petition for the exception of the Jewish method from this decree, the concluding words of the Minister's reply were that the provisions concerned " . . . . the moral status of the matter, which is not at all concerned with religion but simply with the consideration of the prevention of cruelty to animals, for it is apparent that any ritual custom, of however long standing, and having its origin in varying human decrees, does not deserve any consideration if it is calculated to give moral offence, or if it is at variance with the general laws of the Government." That was towards the end of the last century, and the expression " varying human decrees " is interesting, for Shechita is practised in Saxony at the present time. The comparatively recently eliminated ritual of " suttee," whereby Hindu widows practised self-immolation in the late husbands' funeral pyres, would be a good example of a custom " calculated to give moral offence " and " at variance with the general laws of the Government "—but not so the Mohammedan ritual of slaughter. When, and if ever, the religious rite discussed above be definitely demonstrated as unnecessarily barbarous, the people most intimately concerned will probably be the first to initiate a change.

In view of the foregoing, it is now put forward that the actual procedure of slaughtering cattle by the Mohammedan method has not been demonstrated to be unnecessarily cruel, when compared with any other known method of slaughter, provided that the operation be skilfully carried out, and that therefore there is no case to justify any attempt to interfere with, or to abolish, this method in Malaya.

So much for the actual cutting of the throat. But there is still plenty of room for improvement in every other aspect of the slaughtering processes. It is the treatment and handling of the beasts prior to slaughter, and also the means whereby they are brought to the point of death, to which attention must be turned if the elimination of unnecessary suffering and of cruelty is to be accomplished. Preliminary mishandling and rough usage by drovers and attendants may be stamped out by efficient supervision and a system of penalties for the offenders. The routine in the slaughter chamber itself gives one of the best opportunities for the elimination of a great deal of cruelty. An animal will not lie down and quietly hold up his chin to facilitate the throat cutting. He must be coerced into a convenient position and then cast by means of ropes. Invariably he falls heavily and struggles frantically until the ropes can be drawn taut and his head secured. A body weighing anything from 400 to 1,000 lb. does not come gently into contact with the concrete floor when the legs are suddenly pulled from under it. Severe and extensive bruising is a common result and occasionally fractures of bones and of horns occur. Undoubtedly this is the most painful part of the entire proceeding. In some European abattoirs large mattresses are used for breaking the force of the fall of the unfortunate beasts. Objections to the use of these are that they quickly become sodden with moisture and saturated with blood and must be renewed at frequent intervals. A rather sudden inspiration in this respect is that Malaya might lead the way in producing yet another use for some of our superfluous rubber. The idea of large, solid but soft, rubber mattresses for abattoirs appears to have many attractions, if practicable, and might be worth the attention of some of our rubber experts.

The Weinberg Cattle-casting Pen, after many years of trial, modifications and improvements has become a satisfactory mechanical method of putting the animal in the proper position for slaughter without the least trace of the rough usage and fright usually associated with casting. Writing of this pen in the *Veterinary Journal* of September, 1927, Professor F. Hobday, C.M.G., F.R.C.V.S., F.R.S.E., states :—" The pen consists of a strong covered stall, amply padded inside, large enough for beasts of any size, but easily adjusted so as to accommodate large or small ones. The pen revolves within two large iron rings, one at each end of the stall, and by operating a lever is made to turn half a revolution, so that the animal is laid quickly and gently on its back, resting on the well-padded top of the pen. No pain attends the process, and the animal hardly has time to realise what is happening before the vessels of the throat are severed. Its head gets into the right position for the cut automatically, resting on a low platform, whilst an attendant steadies the head with his hands . . . In the case of perfectly quiet animals the use of the pen reduces the time taken in casting and getting the animal into position for the cut by more than half as compared with the quickest of the existing methods, and by very much more than half as compared with other existing methods, whilst it abolishes the pain attending any of them. But the outstanding merit of the pen is that vigorous and restless animals which under existing methods might have to undergo long minutes of suffering and terror, often attended by severe injuries, are by its use cast and brought into the required position for the cut with the same rapidity and freedom from pain as the quiet ones. Even the greatest of the cruelties of any of the present methods of casting would thus be brought to an end by the adoption of the mechanically working pen."

As recently as January of last year a committee, composed of representatives drawn from various Humane Societies, Metropolitan Bodies, Jewish Societies and prominent members of the medical and veterinary professions, as well as a professor of physiology and a consulting engineer, formed for the purpose of testing this machine, gave it their approval in the following resolution :—" That this committee is satisfied that the Weinberg Machine, as demonstrated both by the durability tests and the final trial held to-day, fulfils the objects for which it is designed, and constitutes a great improvement from a humane standpoint on existing methods of casting animals for Shechita, and recommends its adoption in place of present methods."

Knowing that acts of cruelty are perpetrated daily in the casting of animals for slaughter, and seeing that these particular acts are now unnecessary, or at any rate now might be avoided, here is a great opportunity for the

practice of humaneness on a large scale. About 20,000 cattle are slaughtered annually in Singapore alone, so here are 20,000 opportunities for acts of mercy—by doing away with the brutality of the existing casting methods. A mechanical device such as that described above should be installed. Singapore has schemes on foot for new modern abattoirs. To begin with, one of the machines should be put into use in the existing abattoirs by way of a trial and to take the edge off Asiatic conservatism. The experience thus gained would be of great value in installing the machines in the new abattoirs. Two machines in use, and one as a spare, would be ample for dealing with the numbers of cattle slaughtered daily in this town. The success of the experiment in Singapore would lead to their adoption throughout the country—perhaps in all the large Mohammedan abattoirs in the East. Meanwhile, some kind of a mattress should be used in order to eliminate some of this unnecessary cruelty and torture.

Sheep are slaughtered in Singapore after the Mohammedan fashion, and although there seems to be almost unanimity and agreement between expert advisers that the severing of the large vessels of the throat, when done expertly, is as humane as any other method with regard to the speediness with which unconsciousness ensues, and although these animals are easy to handle and there is no casting as in the case of cattle, there is still room for improvement in the routine of this branch of abattoir work. Slaughter of sheep without preliminary stunning is not a purely Jewish or Mohammedan rite, for this practice is common all over the world. In different places there are different methods of cutting the throat of the sheep. In Singapore the work is done by Bengalis, most expeditiously. Perhaps it is carried out a little bit too expeditiously. The sheep or goat is carried from the pen and laid on a low table on its near side and with three of its legs held by an assistant. The slaughterman stretches back the head and tenses the skin of the throat region and with one draw of the knife severs the vessels and tissues right through to the cervical vertebræ. As a rule, he then inserts the point of his knife in the openings of the larger vessels and slits them for a length of a few inches. (This is also done in the case of cattle in order to overcome the tendency of the elasticity of the cleanly transected vessels to contract and so slow down the bleeding.) Having completed the cut, the sheep is laid on the floor to bleed and the next one is laid on the table. The head is not completely severed, as in the case of cattle. As a rule, there are two tables in use in the one slaughter-chamber and consequently the floor is soon littered and crowded with sheep bleeding and reflexing all over the place. (The word "shambles" is derived from the Anglo-Saxon name of the low table on which sheep are killed). Now one of the most striking things about the business is that the timid and stupid sheep awaiting his turn on the table does not seem to be a bit scared; the expression in his eyes is quite placid—if anything, he seems to be overtaken by a most awful curiosity. Solid screens have been erected in the Singapore abattoirs between the slaughter chambers and the pens of the awaiting sheep in order to obstruct the views of the animals, but . . . Sir Leonard Hill says that "It must be borne in mind that animals have no more consciousness of death than uneducated babies have. Man's recognition of the hideousness and horror of the slaughterhouse is the result of education. It is absurd to think—as sentimental people do think—that animals are conscious of the presence of a dead carcass or spilt blood." Nevertheless, the system should be reorganised a little. To begin with, there should be only one table in each slaughter chamber. So soon as the bleeding is well established the head should be severed and the bleeding continued in another room, to which the carcass could be transferred by means of an overhead rail. Gravity would help the bleeding of the slung carcass, and the dressers could just as easily carry out the skinning, which is at present done on the floor of the slaughter chamber.

The question as to whether pigs should be stunned prior to bleeding has been the source of considerable and bitter argument. They are not stunned in Singapore, nor is there any religious rite in connection with their slaughter. The work is done by Chinese. The local method is as follows:—The pigs are kept in pens—either still in their baskets or let loose in the pen—close to the slaughtering place. Big old pigs must be kept in their crates, else they would damage one another by fighting. In the new pig abattoirs in Singapore the sties are too close to the slaughter chambers. During the slaughtering hours there is a background of noises, human (more properly semi-human) and porcine, which is indescribable. Over all the pigs is a cloud of abject apprehension and nervousness, and the visit of a coolie to the pen to select the next victim is a signal for that apprehension to turn to stark agonising terror, the pigs, if loose, struggling desperately to get into corners and behind one another. Both the vocal and facial expressions (especially in the eyes) of these terror-stricken animals indicate extreme mental agony. The pig is brought from his pen to the slaughter chamber—he may be carried, or persuaded in a variety of ways; one of the Chinese methods of persuasion is unmentionable. Arriving in the chamber, the pig finds that the floor is covered with the bodies of his late friends in all stages of from just stuck to scalded and nicely scraped. And over all is blood and steam and running water. The animal is laid on a table. He is struggling, protesting and pleading all the time and may give a couple of men a tough tussle to get him into a proper position for the slaughterman to keep him there. Once in position he is "stuck"—that is, he is stabbed with a knife, usually double-edged, straight, and with a blade six to eight inches long. The knife is inserted medially, anterior to the sternum, thrust towards the heart, and withdrawn with a cutting motion. (A somewhat similar thrust with a kris was an old Malayan method of execution for certain crimes). When the slaughterman considers that the animal is bleeding properly and freely the carcass is put on the floor and the next pig has already arrived.

Now, fundamentally, the practice of bleeding a pig without preliminary stunning is similar to the Mohammedan rite of cattle or sheep slaughter, but in the details of the practice there are vast and important differences. In pig-sticking the arteries have to be located by judgment, and the only outlet for the blood is the wound made by the thrust of the knife. Therefore the operation is much more difficult and less likely to produce rapid unconsciousness. Only an expert slaughterman can do the work

with a minimum of pain for the animal—and only after constant practice and experience is the expert produced. Even the expert is not infallible, for he cannot guarantee the sureness of his eye and hand on every occasion. Mr. E. J. Burndred, M.R.C.V.S., of the Public Health Department of Blackburn, in giving evidence in a court case, stated that the period of consciousness in a pig after sticking was variable, that there was variability in the way that individual pigs bled, and that there was variability in the actual sticking itself. Even with a skilled and experienced man working the knife these differences in the lengths of time between the stab and the loss of consciousness are very noticeable and may be judged by the length of the period for which the assistants continue to restrain the pig after sticking.

In the great bacon producing countries—Great Britain, the U.S.A., Canada, Denmark and Sweden—pigs are most commonly killed by first hoisting by a hind leg on an endless chain system and then sticking. In those countries there is much opposition to the use of any type of mechanical killer and there is very bitter controversy. Some experts say that sticking without preliminary stunning is not cruel. The main body of opponents to any change from the old method maintains that the carcass of a shot or stunned pig is useless for bacon-curing. They say that the interference with the brain caused by the bullet or captive bolt induces bad bleeding and further that it may cause reflex convulsions so violent as to result in the bursting of capillaries throughout the body with consequent extravasation of blood into the tissues. This latter condition is known as " splashing." A badly-bled carcass is useless for bacon-curing purposes, as the success of the process depends on the comparative absence of moisture from the carcass. The retention of blood and moisture in the tissues not only favours the growth of putrefactive organisms but also prevents the thorough penetration of the curing medium. But, in spite of all this, many large bacon-curing factories have installed mechanical killers without detriment to their business. The position is that there are three almost equally strong schools of thought: (i) preliminary stunning renders the flesh of pigs quite useless for bacon, and anyway any system of stunning cannot be shown to be more humane than simple sticking; (ii) stunning will only occasionally be detrimental to the quality of the bacon, and then but to a slight degree; (iii) bacon produced from pigs which have been stunned before sticking is just as good as that produced by the old method and the stunning should be made compulsory in order to do away with the cruelties of plain sticking.

The most important feature of the above controversy, to us in Malaya, is the recurrence of the word " bacon." All the arguments, at any rate the main ones, centre round the bacon-curing properties of the meat. But there is no bacon-curing industry in Malaya to be considered, though a vast amount of fresh pork is consumed. (An average of approximately 21,000 pigs per month were slaughtered in Singapore alone before the present trade depression. Practically the whole of this is consumed by the Chinese community). Mr. D. J. Anthony, M.R.C.V.S., D.V.S.M., veterinary officer to a very large bacon-curing firm in England, and a staunch supporter of the first group mentioned above, in an article strongly in favour of simple sticking, states that if bacon curers " were compelled to use mechanical killers they would either have to give up bacon-curing altogether and sell their meat as fresh pork or . . . " The alternative does not concern us here. The point is that in Malaya, where the flesh of pigs is consumed as fresh pork, soon after slaughter, there is no reason why the old method of sticking without stunning should not be abolished.

First of all, some method of restraining the animal while being stunned should be introduced. There are a variety of pig-traps used for this purpose. Probably the most simple and efficient is that used in Holland and known as the Van Dorp Pig-trap. (Preliminary stunning of pigs is compulsory in Holland.) This consists of an iron trap, in shape somewhat like a common drinking trough, which is entered by a door leading from a narrow passage communicating with the pens. The trap is oblong in plan and of a size to fit a large pig. It has no top or roof. In cross-section it is V-shaped, but the two long sides slope inwards without meeting at a point, a narrow floor occupying the lower part of the V. This is a false floor. The principle of the trap is as follows. The pig comes along the passage from the pens and must enter the trap, which is situated just inside the slaughter chamber. So soon as the animal stands on the narrow false floor of the trap a lever is pressed by the slaughterman, and to the pig's consternation he finds that the bottom has suddenly fallen out of his universe and he is held fast by two sloping sides of the trap, the whole body, including the head, being immobile. Before the animal can recover from his dismay his suspense can be ended by stunning in any way desired. After stunning, another lever releases one of the sides of the trap, thus tilting the body on to the floor, where it is stuck and bled.

The operation of stunning a pig presents few difficulties, and there are a number of effective and simple contrivances for the purpose. The difficulties arise in the case of large or old boars or sows, but such animals may be regarded as exceptions in this country. Owing to the peculiar shape of the skull, the enormous development and toughness of the frontal bones, and the comparative smallness of the brain in some of these animals, it occasionally happens that penetration to the brain does not take place at the first attempt. Quite commonly pigs are stunned just with a single blow of a hammer or a mallet on the forehead. One of the objections put forward against the use of mechanical killers was the difficulty of restraining the pig whilst the instrument was being applied to the vital spot; another was the danger of having shooting instruments discharging bullets in a crowded abattoir—fatal accidents have been caused both by the accidental discharge of the instruments and also by the bullet passing completely through the body of the animal and ricocheting round the walls of the slaughter chamber. Neither of these objections needs to be considered here. The installation of Van Dorp Pig Traps is the answer to the first, and whatever small danger there may be in connection with the bullets can be eliminated by not using that type of killer but employing instead one of the efficient and well-tried patterns of captive bolt or sliding bolt instruments. The type of instrument to be chosen could be decided by the abattoir authorities after experiment. In all probability the hammer would be quite efficient for the stunning of the average pig slaughtered in Malaya.

(It is of interest to note that the original idea of mechanical killing was worked out by a veterinary surgeon —Dr. Seigmund, who was Director of the Basle Abattoirs in Switzerland from 1870 to 1909. For several years he experimented with various patterns of shooting apparatus, and it was to his credit that he refused to patent any of them " because he did not want to hinder the perfecting of the apparatus." Later, Colonel Hakel, of Zurich, the owner of an ammunition factory, added a great improvement to the working of the apparatus in the form of a silencer which considerably added to the furtherance of the use of the instrument. From the above work has sprung the variety of mechanical killers which is on the market to-day).

However, dipping into the future, one sees possibilities of a wholesale revolution in the present system of slaughtering animals. Quite recently most encouraging results have been obtained in Germany, where experiments have been carried out in applying electricity as a means of rendering animals unconscious. Dr. Max Muller, of the University of Munich, together with an electrical engineer (A. Weinberger) has devised a new process of stunning pigs by electricity. The pigs are run into a trap, such as the Van Dorp Trap, and are touched on the front of the head with a rod which serves as an electrode. The stunning takes place instantly and the insensible pig is tilted out of the trap and bled without regaining consciousness. If the animals be not slaughtered immediately after the stunning they recover slowly and become quite alive again after three or four minutes. If stuck immediately after stunning they bleed copiously and the insensibility passes over into anæmic unconsciousness followed by physiological death. This method occupies less time than shooting. The animals thus stunned can be touched without any danger. Dr. Muller states that the current consumption is very low, since an intermittent direct current of 30-40 volts is sufficient. (*Vide Veterinary Journal,* 1928, page 450.)

Professor Muller has also experimented on cattle with a similar method, and has been equally successful (*Vide Veterinary Journal*, 1929, page 164). In the same volume of the *Veterinary Journal* there is a translated abstract from the work of Kosler of Stuttgart, who used electric lighting current at 110 to 120 volts for a series of successful stunnings of cattle. He states: " As an electrode a large copper plate was used, which was laid on the damped loin region, and a brass tube was put in the mouth like a bit. After putting on the current the animal suddenly sank down on its knees and laid flat on its side. Immediately after knocking off the current complete unconsciousness was established. After two or three minutes consciousness returned . . . The electro-technique is easy, handy and simple and admits of the construction of apparatus without danger to man." In Dr. Muller's method " . . . a weak interrupted current, 8,000 to the minute, makes the animal momentarily unconscious. The head of the animal is loosely attached by the horns with a cord attached to a hook on a winder and the animal does not stumble from the momentary unconsciousness, but goes down at the hind end. The stunned animal is then lowered gently to the ground." In all probability a preceeding such as the above could be used in conjunction with the Jewish or the Mohammedan rituals without any objections. It does away with the rough handling and the body of the animal is not injured in any way; and it eliminates that vexed question as to whether the actual throat cut be painful or not.

Electrocution of the smaller animals, such as cats and dogs, has also been tried out. The *Indian Veterinary Journal,* Vol. 7, No. 1, gives a description, complete with plan and wiring details, of an electrocution chamber which has been installed by the Municipality of Ootacamund. The method is stated to be very quick, absolutely painless, and quite safe for the operator. Also, it is said to be fool-proof and no mistakes causing discomfort to the dog can be made. The animal has no anticipation of his fate nor any preliminary fright or panic. In many centres in England thousands of small animals are destroyed by electricity. The electrocution box for the dog resembles a roll-top desk. The animal stands on a platform under a flexible wooden shutter which, when completely closed, forms the contact with the current. Cats are put into a kind of drawer very much like that of an ordinary table. The bottom is of metal and contact is established immediately the drawer is closed. Death in each case is instantaneous, but the bodies are not removed for one minute.

The public of Malaya takes a great interest in this question of the destruction of unwanted animals. The method used in this country is the lethal chamber attached to the ordinary coal-gas supply. Such a method has much to commend it, but it is open to the objection that, unless in the hands of an expert operator, it may be converted into a sort of torture chamber, the unfortunate dog or cat being more terrified by this than by any other method of destruction. The feelings of a highly intelligent animal which is thrust into a closed and often dark box from which there is no escape, and in which the air is charged with a strange and nauseous vapour, may easily be imagined. Such animals sometimes become panic-stricken and struggle frantically as though they had an intuition of impending doom. This may go on for anything from three to ten minutes, before the gas begins to make them drowsy, and then even after the onset of unconsciousness there is a long interval before death. The best lethal chambers are roomy and well lighted by means of a number of small plate-glass windows. There are two humane methods, and only two, of using such a chamber. First, the animal should be plunged suddenly into the chamber previously filled with the lethal gas. In such cases unconsciousness comes swiftly. Alternatively, the dog should be placed in a chamber which contains nothing but pure air, and the gas is then *gradually* applied. When this method is adopted there is rarely any panic and the dog passes slowly into a deep sleep. This state can be observed through the windows and then the gas can be turned full on, or the unconscious animal can be taken out and killed by any other method while insensible. By either of the above two methods the end is painless. But anything between the two, that is, between the use of a chamber completely filled with gas and the use of a chamber which contains nothing but air and into which gas is allowed to enter gradually, will cause slow suffocation with its accompaniment of desperate panic and frantic struggling. The second is undoubtedly the more humane of the above two methods, but where a large number of dogs have to be destroyed it is too lengthy. As a substitute for coal

gas, chloroform produces a painless death when properly administered, but otherwise the dog struggles against its action, sometimes very violently, for a longer period than against coal-gas.

Death from prussic acid is very rapid both in dogs and cats and the administration of the agent is very easy. After the proper administration of a lethal dose of this poison there is a short period during which the animal is quite normal and shows not the least sign of discomfort or apprehension. Then the breathing and the pulse become accelerated, but the animal still shows no signs of uneasiness; suddenly the acceleration becomes violent and the animal falls over and emits a shriek or two, but is dead within a few seconds. The few shrieks before death are rather horrible, but it is said that they are not indicative of pain but arise merely as the mechanical result of muscular spasms and stimulated respiration. The best way to administer this drug is by thrusting a hypodermic needle between the ribs and injecting 1 c.c. of Scheele's acid (containing four per cent. hydrogen cyanide) into the pleural cavity. One dram of the acid administered orally will kill a dog inside 30 seconds.

For dogs the hypodermic injection of an overdose of morphia is a most humane and certainly the least alarming of all methods in general use. The condition of the dog remains unchanged for a short while, then he shows signs of drowiness, almost invariably he vomits, and finally he goes to sleep and does not wake. A disadvantage of this method is the difficulty in computing a suitable dose. Professor Hobday reported a case in which 20 grains of the drug failed to kill an old dog. The average lethal dose for a normal terrier is about five grains. When the dog has come well under the influence of the morphia death may be accelerated and assured by the administration of chloroform or of prussic acid.

Cats cannot be destroyed through the medium of morphia on account of the peculiar excitement and delirium induced in these animals by the administration of the drug. A rectal injection of chloral hydrate produces a soporific state in which prussic acid or chloroform may be administered. Chloretone in large doses will put a cat or a dog permanently to sleep, but its action is very slow. The intracardial injection of solutions of magnesium sulphate or magnesium nitrate kills a dog promptly without any signs of pain or struggle. (This method is in vogue in parts of Europe, where the flesh of the dog is regarded as a very much desired dainty amongst the poorer folk because the salt does not interfere with the quality of the flesh.)

Probably the most humane method of destroying the smaller animals would be by the use of tribromethanol—sold under the proprietary name of "Avertin." The use of this drug as a basal anæsthetic for minor and major operations has become very popular both in human and animal surgery. A rectal injection of Avertin induces in from three to ten minutes the onset of a profound narcosis lasting for a period of from 12 to 24 hours. The degree of narcosis depends upon the dosage and varies from deep stupor to general anæsthesia. An overdose will cause death. In a report on the use of the drug in feline surgery Professor J. G. Wright, F.R.C.V.S., professor of therapeutics and pharmacology at the London Veterinary lege, states:—"The induction of narcosis is never associated with any violent stage of excitement, although a little muscular jerking may occur at about the third minute after injection. The sensation appears to be a delightful one, for we have never had a cat attempting to bite or scratch when becoming narcotised by "Avertin," and during the later stages of narcosis the animal assumes an attitude of natural sleep, often accompanied by purring."

The problem of dealing with Malaya's unlicensed and homeless dogs is one which needs close examination. These animals are a source of danger and nuisance to the public and a source of misery and disease amongst themselves. The apathy of the Chinese and non-Mohammedan Indians, together with the antipathy of the Malays and Mohammedan Indians, contributes to the continuance of this nuisance. As a general rule, no Asiatic will voluntarily take the life of an unwanted puppy. They have no compunction in taking newly-born puppies away from the mother and leaving them to die of starvation in the jungle or on the roadside, nor in leaving them to the mother until they are strong enough to stray away and fend for themselves, thus swelling the ranks of the unowned pariahs. In a country like Malaya, where rabies is common, expensive staffs of dog-shooters must be kept constantly employed in order to keep down the numbers of these unhappy beasts. This system of warfare is most unpleasant to contemplate. One hundred thousand would probably be a low estimate of the number of dogs destroyed annually in Malaya in this manner. The shooters are good marksmen as a rule, but it would be too much to expect that all these dogs are killed outright at the first shot. The imagination shies away from the thought of what happens to the wounded and crippled which escape. There was a case once where ants . . . but we need not go into details. Where this system is practised in crowded municipal areas there is danger also to the public. It appears that there is no alternative method. These dogs are very shy and wily and the idea of trapping them, either by driving them into nets, by casting nets, or by nooses is impracticable. If all unwanted puppies could be collected or handed over to the authorities for destruction the problem would almost be solved. But such a system appears to be impracticable also. And so we arrive at the other alternative—since the litters cannot be collected for destruction they should be prevented altogether. This could be accomplished by the elimination of the bitches, or at least by greatly reducing their numbers. To effect this the license fee for a bitch should be very high, say $10 or $15 per annum, and that for a dog temptingly low, say $1 per annum. An owner who is willing to pay a high licence fee for his bitch every year is going to look after her properly. That means that promiscuous breeding—the source of all the stray dogs—will be done away with. It also means that the great majority of people who keep a dog will have a male instead of a female. In addition, the various dog by-laws should be more strictly enforced; especially those concerning the production of the animal at the place of registration and the affixing of the metal licence tabs to the collars. Contraventions of the by-laws should be most severely dealt with. Thus, in time, the number of bitches would be reduced considerably, and therefore the amount of casual breeding, and thereby the numbers of stray and unwanted dogs. In order to prevent hardship, existing

bitches which have been registered for say, five consecutive years, should continue at the present rate. A bitch which has been spayed and rendered incapable of breeding, and whose owner produces a veterinary certificate to that effect, might be registered at the same fee as a dog ($1). Such a certificate should contain a close description of the animal in order to prevent cheating. If the above scheme were put into action through Malaya there would be little or no work for the dog-shooters in a few years after its commencement, and one of the most unpleasant duties of the veterinary and the police departments would be abolished. By good breeding from selected and well-cared-for bitches the canine population of Malaya would be improved out of all recognition, and the public would be spared a repulsive spectacle which has become common in the everyday life of this country.

The first organised attempts at the prevention and control of cruelty to animals came early in the 19th century. In 1809 Lord Erskine, the Lord High Chancellor of England, introduced into the House of Lords a Bill for " preventing wanton and malicious cruelty to animals." It passed through the Lords, but met with much opposition in the Commons, and eventually was lost. Within a few months of the rejection of that Bill, the first society for the prevention of cruelty to animals was established in Liverpool under the name of " The Society for the Suppression of Wanton Cruelty to Animals," but it was short lived. In the following year Lord Erskine presented another Bill, which, however, had to be withdrawn. In 1821 Richard Martin brought a Bill into the House of Commons to prevent the ill-treatment of horses and other animals." This passed the Commons but was lost in the House of Lords; in 1822 he tried again, and on this occasion was successful. In 1824 the Society for the Prevention of Cruelty to Animals came into being. During its first year the society successfully prosecuted 149 cases of cruelty, and at the present time the number averages over 4,000 cases a year. In 1840 Her Majesty Queen Victoria (an active and practical humanitarian, as her recently published letters show) gave permission for the society to use the prefix " Royal." At present the activities of the R.S.P.C.A. extend all over the British Isles and the society employs over 200 inspectors. Following the inception of the society in 1824 various Acts were passed—all with the object of bettering the conditions under which the domesticated animals existed—and it was in 1849 that the first real protective charter was granted to the lower animals—" The Prevention of Cruelty to Animals Act, 1849." In Great Britain at present the principal instrument of the law is " An Act to Amend the Law Relating to Cruelty to Animals " passed in 1876. A certain amount of subsidiary legislation has since come into being, but the Act of 1876 has been but little changed. About this period Europe in general was well equipped with legislation protecting animals. In India the first P.C.A. Act came in 1890. The recently repealed Straits Settlement Ordinance No. 77 bore the date 1902.

All this statutory provision for the prevention of cruelty to animals, and the steady increase in the legislation for the protection of the lower creatures in general, are an index of the increasing humanitarianism of that age. Probably human nature did not undergo any fundamental changes during this (or any other) period. If we could discover the cause of this changed outlook and apply the principle to our animal welfare problems in Asia, our work here would be greatly facilitated. This point is an interesting one and deserves further consideration.

From time to time various societies for the protection of animals have sprung up in Great Britain. Some of these are good, many of them are useless and stupid. The outstanding and most powerful of all is the R.S.P.C.A. Next in importance is " Our Dumb Friends' League " and then comes " The National Canine Defence League." In addition, there are numerous smaller organisations, and many local P.C.A. Societies which are quite distinct from the Royal Society. All these societies are supported by voluntary subscriptions and bequests. Five years ago the incomes of the three mentioned above were respectively approximately £125,000, £20,000 and £10,000 per annum. Many thousands of pounds thus subscribed are simply wasted and thrown away each year owing to this remarkable overlapping of the societies, each of which has its offices and paid officials and substantial expenses for administration, publicity and so on. Money which should be used in the main cause is thrown away by this redundancy. All these costs could be reduced substantially if the animal welfare work were centralised in one organisation. With the development of animal welfare work in Malaya this duplication of work and expenditure must be carefully guarded against. The incomes of our local societies are not likely to approach the magnitude of those at home: and the smaller the income the more this risk of waste must be watched. Our towns and States out here are inclined to be rather jealous of one another, but there is no reason why there should not be one central Malayan Society for the Prevention of Cruelty to Animals, with ramifications throughout the Peninsula.

An efficient private society is a great asset to the country or locality in which it operates. Provided that such a society be ably administered and be not hampered by feather-brained, feather-bed ideals, its existence has a good moral effect on the public and its provides a stimulus for officialdom. Broadly speaking, the function of the official is to punish cruelty, to try to prevent cruelty by means of various regulations and precautions, and to see that the laws and rules of the state or the municipality be observed. Such a function is good in its own way, but in itself, is not very progressive. The function of a society is more or less to get into closer contact with the people and to introduce them to a new point of view concerning the treatment of all living things. By their propaganda, reports published in the press, and by their good works, humanitarianism can be kept before the minds of the public, so that eventually an impression—even though a subconscious one—is made in the minds of even the most uninterested and indifferent persons. Such a function is good in its own way, but by itself, is a shade too passive to give immediate satisfactory results. The conclusion is, therefore, that the two divisions must work in close co-operation.

There are three other factors of importance in bringing about improvement in the treatment of animals, namely, the press, the police and the schools. It is only recently that the true value of organised publicity has become appreciated. Here in Malaya it is very evident that the press is very willing to help the societies. Every advantage should be taken of this attitude, but the

societies should enlist the support of *all* the local papers throughout the Peninsula and especially the support of the vernacular press. At the same time, it must be stated, the press may easily be the opposite to helpful. For instance, recently prominence was given in one of our local papers to a heavily-headlined item "600 parrots burned alive." It went on to tell how a ship arrived in London from South America with 600 (or so) parrots. This was during the time of the psittacosis scare. The authorities refused permission to land these birds and the papers gave the gruesome details of the captain's action—all the parrots "were thrown alive into the ship's furnaces." The broadcasting of items like this does not do any good in this country. If the news had to be published, some comment should have been made, in fairness to the captain of the ship and to the other Europeans out here. It would be difficult to find any practical alternative for the captain's decision. He would have to get rid of that cargo—he could not turn round and take them back to South America (the ship was bound for Northern Europe ports) he could not let them loose to fly away, he could not shoot them or poison them. He probably thought of drowning them, but the health authorities would not like that. And so, horrible though it seems, his action was probably the best one under the circumstances. The fumes and heat of the ship's furnaces must have caused instantaneous death to those birds.

The police could be a very powerful instrument in suppressing acts of cruelty. If every constable were taught the terms of Section 3 (1) of our new Prevention of Cruelty to Animals Ordinance, 1930, the number of acts of cruelty committed in public would decrease rapidly. The police at present do not appear to be greatly interested in the subject. Maybe the best way of arousing their interest would be through the medium of the veterinary department.

In Boswell's "Life of Johnson," Johnson is credited with the statement that "Pity is not natural to man. Children are always cruel. Pity is acquired and improved by the cultivation of reason." It may be that this is the source of Lord Tennyson's inspiration in the line quoted at the beginning of this paper. The statement gives us the clue to the underlying principle of the change which took place in the relationship of man and the domesticated animals during the last century, and if we substitute the word "education" for "the cultivation of reason" we come to the most powerful of all factors in the development of humanitarianism. There is no getting away from the fact that the average child, the little boys at any rate, are naturally vicious and savage. If the most humane man alive did a little bit of honest soul-searching he would have to admit the truth of the statement. But these little barbarians are at their cruellest stage during their most impressionable years. Probably when a child is cruel it has just come to the realisation that it possesses power over some other living thing, and its acts of cruelty are not carried out for the fun of seeing some animal in pain, but simply to exercise this new found sense of physical superiority. If this "physical superiority" complex were carefully diverted towards inanimate things childish cruelty would be abolished. To accomplish this diversion we must pay attention to Johnson's "cultivation of reason" and point out to the child the sin and meanness of inflicting pain on some sentient and defenceless creature.

This brings us to the importance of the schools as a factor in the campaign. The educational authorities have at hand the material and the means for developing wholesale humanitarianism. The societies should devote a great part of their activities towards getting into touch with the young members of the community—in the schools, the boy scouts, in the boys' clubs, and suchlike institutions. The means of developing this friendly attitude towards animals is no concern of this paper—it would probably be quite a simple matter for the educational authorities and the societies in collaboration.

Although education would appear to be at the root of any improvement in our relationship to animals, and if active steps were taken immediately to deal with the question from this aspect, it would be some time before any convincing results were seen. Meanwhile we must take other steps to bring about an immediate improvement in this country. These steps have been indicated in the foregoing pages and the most urgent and most important of them are: Preliminary stunning and the fitting of pig-traps in the pig abattoirs; rubber mattresses or some other means of breaking the fall of cattle about to be slaughtered; no slaughtering by butcher's employees—all killing to be done by expert licensed slaughtermen, employed by the abattoir authorities; control and centralisation of the wild bird and smaller animal shops; reduction in the number of stray dogs by greatly increasing the licence fee for bitches; greater severity in dealing with convicted offenders against the cruelty ordinance, and finally, publicity and education.

I have attempted in these pages to put before you some of my views on the question of cruelty to animals in this country. These are personal opinions for which I offer no apology, but I do apologise for the disjointed nature of this paper, which was written in "fits and starts" and frequently laid aside untouched for months, while I was tempted to put forward some more concrete and less debatable subject. However, I have carried on with it and inflicted it on you in the hope that it will provoke such discussion as may bring to light opinions and suggestions which will lead us all a step further in the betterment of the lot of those unfortunate creatures who have to share this earth with the most predatory and cruel of all species in the zoological scale.

(To be concluded with a report of the discussion.)

Army Veterinary Service.

London Gazette—War Office—Regular Army.

June 9th.—Major L. M. Verney, D.S.O., F.R.C.V.S., to be Lieut.-Colonel (May 5th).

Movements of Officers.

Major J. Mullany proceeded to Newcastle for duty on May 22nd.

Captain E. O'Kelly proceeded to Newport for duty on May 25th.

Major D A. Gillmor and Lieut. J. V. Tevlin are under orders to proceed to India for a full tour of duty; they are due to sail on June 26th.

. . . . .

The following officers are now attending a course at the Royal Army Veterinary School:—Majors H. J. Hughes, M.B.E., J. Bell and W. E. Barry, and Captain L. H. B. Poer, M.C.

Royal College of Veterinary Surgeons.

Annual General Meeting.

The Eighty-eighth Annual General Meeting of the Royal College of Veterinary Surgeons was held at the College, 10, Red Lion Square, on Thursday, June 4th, 1931, when the following members were present:—Sir John M'Fadyean (President) in the chair, Lieut.-Colonel J. W. Brittlebank, Mr. W. Brown, Professor J. B. Buxton, Mr. J. C. Coleman, Professor J. F. Craig, Professor F. T. G. Hobday, Messrs. G. H. Livesey, G. H. Locke, J. W. McIntosh, Major-General Sir John Moore, Major R. H. H. Over, Captain E. Brayley Reynolds, Mr. H. L. Roberts, Mr. W. G. Robinson, Lieut.-Colonel P. J. Simpson, Mr. Arnold Spicer, Captain W. K. Townson, Colonel G. K. Walker, Professor G. H. Wooldridge, Captain W. G. Wragg and Lieut.-Colonel T. Dunlop Young.

The Secretary read the notice convening the meeting, as it appeared in the *London Gazette* for Friday, May 8th, 1931.

Apologies for absence were received from the following: Major Abson, Dr. O. Charnock Bradley, Mr. Holroyd, Mr. Hughes, Mr. Nairn, Mr. Male, Mr. Trevor Spencer, Dr. Whitehouse, Mr. Willett, and Captain Sidney Villar.

The Minutes of the previous Annual General Meeting were read, and having been duly approved were signed as correct.

Election of Council.

The President: The next item on the agenda is the election of Council. As members are already aware, it was not necessary to send out any election papers on this occasion, because the number of those nominated exactly agreed with the number of vacancies. The eight members who were due to retire by rotation were all nominated for re-election, and as no other nominations were received, no ballot is necessary. I have therefore to declare the following gentlemen are re-elected members of the Council for a further period of four years: Dr. O. Charnock Bradley, Professors J. F. Craig, S. H. Gaiger, Messrs. J. Holroyd, J. W. McIntosh, G. P. Male, Professor A. W. Whitehouse, and Colonel T. Dunlop Young.

Annual Report and Financial Statement.

The President: The next and most important business of this meeting is to receive and consider the Annual Report of the Council, a copy of which has been sent to all the members. In order that the Report and Accounts for the year may be open to discussion, I will move from the Chair that the Report be received and adopted.

Colonel J. W. Brittlebank: I second that.

The President: I hope it will not be considered out of place if, by way of opening the discussion generally, I make a few observations on the contents of the Report. I would like to call attention in the first place to the figures given on page 2 with regard to the examinations conducted during the year, in particular to the second set of figures, which shows the number of individual students who were examined at our examinations in 1930 as compared with previous years. It is interesting and in some ways instructive to note that as recently as 1923, 517 students were examined in the year, and that this year the total number was 356. You will see a marked decline in the number of students presenting themselves for examination since 1924. I think it is pretty obvious that the larger number of students who presented themselves during the first three years given in the table—1921, 1922 and 1923—were the residue of the very large number of students that joined the colleges at the close of the Great War. There was a very notable reduction of students of course, during the years of the War, and quite naturally a larger number entered in the following years.

There are very important matters referred to on page 3 of the Report referring to the work of the Parliamentary Committee, but nothing that I think calls for any special comment by me.

Perhaps the most interesting fact in connection with what is said of the work of the Examination Committee on pages 4 and 5 is with regard to the provision of the new Five Years' Scheme for examinations when it comes into operation, namely, the decision of the Council that when that scheme comes into force they will call upon the students presenting themselves for the final examination to show evidence that they have received instruction, or have had an opportunity to make themselves better acquainted than students on an average have been in the past, with what is called "seeing practice" with members of the profession. I think that ought to be given publicity throughout the profession, because it is a scheme that demands very helpful co-operation, and without that very likely the result would not be what is hoped.

The result of a great amount of work is summarised in what is stated in the Report under the head of Registration Committee, which probably is second to none of the other Committees in its importance. Annually one gets more and more experience showing how necessary it is to be constantly vigilant to see that the privileges which have been granted to us by the Veterinary Surgeons Act are not encroached upon by unqualified persons. This is rather depressing, because one would have thought that with the advance of general education the time would come when stock-owners in general would recognise that it is not a wise thing to go to persons who have had no special training for advice regarding the treatment or prevention of disease.

Then I should like, lastly, in connection with the Report to call attention to the Annual Balance Sheet. The two principal sources of income to the College are the annual subscriptions of members, and the fees that are paid by students entering for the different examinations. The principal expense of the College is in connection with the conduct of these examinations. You will see that the excess of income over expenditure for the year was £251 11s. 1d. It is a very unsatisfactory sum. It simply stands as evidence how hampered the Council is at the present time, because the condition of the funds forbids them to do things which we are sure would be in the general interest if they could be done. As a matter of fact, the sum shown as the cost of the examinations would be very much higher if there were added a due proportion of the administrative expenses of the Council.

The members of the Council, I have no doubt, will be very glad to hear any observations that any member present may desire to make on the Report.

The Secretary: I ought, Sir, to make an apology, as Secretary, for an error appearing in the Report at page 10, where, through a clerical error, in the list of deaths the name of J. E. Johnston, of Belfast, is given. All members of the profession will know that this is a mistake for the son of Mr. J. E. Johnston, whose initials are R. E. I am very sorry that mistake should have occurred.

The President: Gentlemen, if I might, I would like to call your attention to the second paragraph on page 8, which deals with the treatment of animals belonging to poor people. Everyone well acquainted with the veterinary profession knows that veterinary surgeons are always ready to treat for minimum fees, or wthout any fee at all, animals belonging to poor people, but there has within the last few years been put before the public a view with regard to animals belonging to poor people which I am sure the veterinary profession as a whole, and indeed the public, will not assent to. It is that an inferior class of persons in respect of their knowledge about disease, are good enough to treat animals belonging to the poor. I think the facts only require to become fully known to the public in order that our own view will be generally accepted, that there is no shadow of excuse and no necessity for telling the public what is virtually being told to them, *viz.*, that such and such persons are not qualified veterinary surgeons, but nevertheless it is quite all right to employ them for treating animals of the poor.

If no one desires to speak, I will put the motion to the meeting that the Report be adopted.

The motion was carried.

Presentations.

Fitzwygram Prizes.

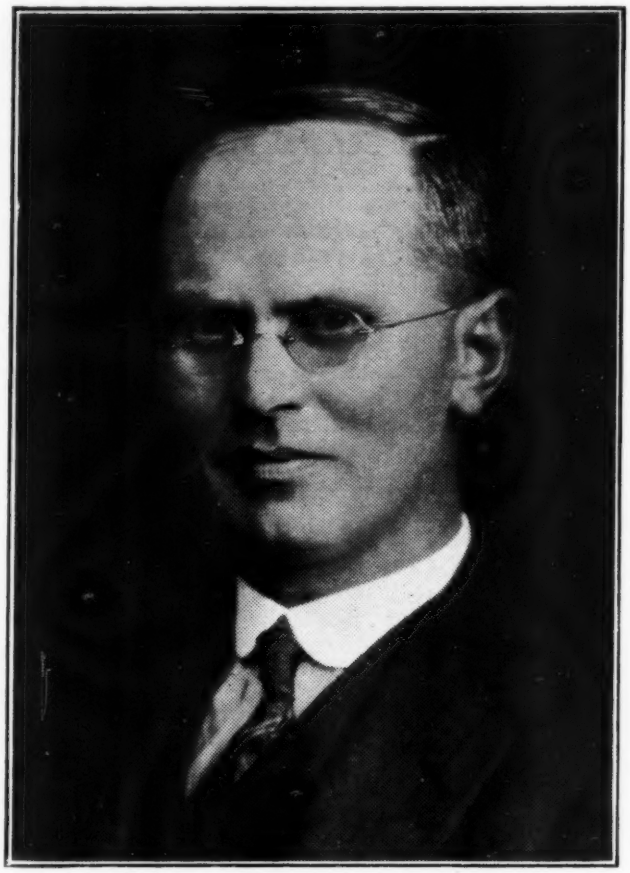
The first Fitzwygram Certificate was then presented by the President to Mr. William Graves Robinson, student of the Royal (Dick) Veterinary College, Edinburgh, as having obtained during his four years' course the highest number of marks in all subjects.

The winner of the second Fitzwygram Certificate was not present to receive his award.

John Henry Steel Gold Medal Award.

The President: Gentlemen, my next duty is a most agreeable one. It is to hand to Professor Craig the John Henry Steel Medal. It is a great honour well deserved. (Cheers.) It is not necessary in this meeting to give any evidence to show that Professor Craig highly deserves this honour. The profession includes no one who throughout his life has acted more constantly with a view to the advancement of the profession. I hand you this Medal, Professor Craig, and I have no doubt it will be highly esteemed and handed down in your family.

Professor J. F. Craig: Sir John, may I be allowed to express my very grateful appreciation of this high honour which has been conferred upon me. I regard the honour as enhanced by the fact that my old teacher, our President, Sir John M'Fadyean, who is also the senior medallist, has presented this medal to me. I am sure that everyone who is a member of this profession regards the honour as an exceedingly great prize, because this is the only honour of this kind which the College has within its gift. I



Professor J. F. Craig, M.A., M.R.C.V.S.
Principal of the Veterinary College of Ireland.

regard it as a recognition of work done, but also an encouragement and an inspiration of work that may be done for the advancement of veterinary science.

I notice that in this case the colour of the medal has changed. I think I am the twentieth recipient of the medal, and now that the John Henry Steel Medal is gold, one would naturally like that the presentation of a gold medal were made retrospective, but I do not think that can be done. However that may be, I appreciate very highly the very generous terms in which Sir John has referred to my work, and I may say I will treasure this gift as one of the highest that I have received, and also the memory of this presentation as a very dear one to me. Thank you, Sir John.

The President: Gentlemen, that concludes the business of the meeting.

Vote of Thanks to the President.

Colonel J. W. Brittlebank: Gentlemen, I think the meeting cannot close without an expression to our President of our appreciation of his conduct in the chair this morning. When you know that he has epitomised a good deal of what is in the Annual Report, but has left out an enormous lot that has been done during the past year which really could not have properly come in this Report, and when you realise the enormous task that our President has had to carry out in connection with the International Congress added to the work of this College, you will realise the value of his devoted services to us. I beg

formally to move our sincere appreciation of his conduct as President of this College.

Professor J. F. Craig: Gentlemen, I desire to second that, although it does not require any seconding at all. I think the College could not have been better served, and that Sir John's ability has been greatly tested during the year that he has been in office.

The motion was carried with acclamation.

The President: Gentlemen, I am very grateful to Colonel Brittlebank and Professor Craig for the vote of thanks and the generous expressions which they have used with regard to the method in which I have discharged the duties of President during the year. I am also grateful to you for the way in which you have received them. I would only like to say that it is true that I had a large amount of work to do during my year of office, a considerable part of which was in connection with the International Veterinary Congress, and if I was not over-taxed I know it was due to the willingness and help which I got from all those who were my colleagues on the Council and on the Committee of the International Veterinary Congress. I thank you, gentlemen.

Foot-and-mouth Disease.

National Control Imposed.

The following was issued on Friday of last week by the Ministry of Agriculture:—

"The Minister of Agriculture has to-day been informed by the Ministry of Agriculture for Northern Ireland that foot-and-mouth disease has been confirmed in County Down, and that restrictions have been imposed on the movement of stock from the whole county.

"On June 17th, foot-and-mouth disease was confirmed on a farm in Westmorland and in two farms near Preston, Lancs. Yesterday ten other outbreaks were confirmed in England—namely, seven in Lancs, two in North Riding, and one in Westmorland. This morning, June 19th, three outbreaks were confirmed in Perthshire, and one in Lancashire. All affected animals involved were Irish animals recently imported.

"Some of the affected stock in the outbreaks of June 17th were landed at Heysham from Belfast on June 11th, and others at Holyhead on the same date from Dublin. The animals affected in the Perth cases were imported at Ayr on June 11th, also from Northern Ireland.

"Infected areas have been declared round all the outbreaks covering the usual 15 miles radius, but in view of recent wide movements of Irish animals through markets it is clearly necessary for the prevention of a widespread epidemic to impose control on the movement of animals throughout Great Britain for the time being until full information is available as to the extent of distribution of animals recently landed which may have been exposed to infection. An Order to this effect has been made to-day, operating forthwith, prohibiting all movements of cattle, sheep, goats, and swine in Great Britain except by licence, and prohibiting all markets, sales, and exhibitions of such animals except licensed markets and sales of fat stock for immediate slaughter. The whole position will be closely watched and modifications of this Order made from time to time as soon as circumstances warrant.

"All landings from Ireland have been prohibited since June 17th."

The policy (announced by the Ministry last November) of using serum inoculations on in-contact animals in certain selected herds, is being continued in connection with the present outbreaks.

Victoria Veterinary Benevolent Fund.

Annual General Meeting.

The Thirteenth Annual General Meeting of the Incorporated Society was held at the Royal College of Veterinary Surgeons, 10 Red Lion Square, London, W.C.1, on Thursday, June 4th, 1931. Colonel Brittlebank (President) occupied the Chair, and the following members were present:—Professor J. B. Buxton, Mr. J. C. Coleman, Professor J. F. Craig, Mr. G. H. Locke, Sir John M'Fadyean, Mr. J. W. McIntosh, Major R. H. H. Over, Captain E. Brayley Reynolds, Lieut.-Colonel P. J. Simpson (Hon. Secretary), Mr. Arnold Spicer (Hon. Treasurer), Captain W. K. Townson, Colonel G. K. Walker, Professor G. H. Wooldridge, Captain W. G. Wragg and Lieut.-Colonel T. Dunlop Young.

The Secretary read the notice convening the meeting.

The minutes of the previous meeting, which had been published in the *Veterinary Record*, were taken as read and confirmed.

Election of Officers.

President.—Mr. J. W. McIntosh: I beg to move the re-election of Colonel Brittlebank. We could not have a better man as President and one more interested in the objects of the Association.

Colonel Young: I have pleasure in seconding.

The Motion was carried.

The President: I thank you very much, gentlemen. I may tell you that I appreciate the position very much, but I do hope nobody will think that it is to be regarded as anything in the shape of a permanency. I believe it is a good thing for honours like this to go round, and when the time comes I shall be glad and happy to stand down for anybody who likes to take the position. I shall feel just as much interested in the work we do as I do now as its nominal head for the time being.

Vice-Presidents.—The President: The four Vice-Presidents for the past year are: Dr. O. Charnock Bradley, Mr. S. H. Slocock, Captain Sidney Villar and Mr. E. Alfred West.

The Vice-Presidents were unanimously re-elected, on the proposition of Professor Craig, seconded by Professor Buxton.

Honorary Secretary.—The President: I move this resolution from the chair. I think we have really the best Honorary Secretary that any Association ever had. (Hear, hear.) I have great pleasure in moving that Colonel Simpson be re-elected.

Colonel Young: I beg to second.

The Motion was carried unanimously.

Colonel Simpson: Gentlemen, thank you very much. I will try to do a little more for the Fund than I have done heretofore, and I hope we shall get in even more money this year than in the past.

Hon. Treasurer.—The President: Here again may I ask you to allow me, gentlemen, to nominate for re-election Mr. Arnold Spicer. He ought really to be up here in the seats of the mighty, instead of obscuring himself at the other end of the room. If Mr. Spicer will permit me I would like to move his re-election.

Professor Wooldridge: May I be allowed to second that. I do not think it is possible to get a more whole-hearted Treasurer than he is, or one that is more satisfactory.

The Motion was carried unanimously.

The President: Mr. Spicer, you are elected again to carry on the good work you have so nobly carried on during the last twelve months.

Mr. Arnold Spicer: Thank you, gentlemen, very much for the honour you do me. I am afraid it is a purely honorary position, because the work is all done by the Secretary.

Auditors.—Messrs. Woodhouse and Wilkinson were re-elected Auditors.

Annual Report and Statement of Accounts.

The President: Gentlemen, this Report, as you will see, has been circulated to all members and subscribers to the Fund. The Report in itself tells a sad story. Nevertheless, it tells a story that gives us a considerable amount of gratification, in that we have been able to help so many of those unfortunate people who have not been able to help themselves. Demands on the Fund are greater than ever. That will be immediately evident to you all. Our only regret is that we are not able to give anything like as much to many of our deserving people as we would wish to give. Our charity has been very much restricted owing to the many calls there are upon it.

Perhaps Mr. Spicer might like to say something about the Balance Sheet. If he does not wish to say anything about it, at any rate the Balance Sheet is clearly set forth for you all, and I think you will agree that there is no evidence of any waste in any direction. Every penny we spend is scrutinised in a most careful way.

In the Report reference is made to the wonderful assistance given us by certain specially kind people. I refer, for instance, to our friend Mr. Warwick Fowle, through whose instrumentality we were able to collect the sum of £238 10s. 6d. (Applause.) Then again there is the almost annual effort of our friend Colonel Simpson. Those of us who had the privilege of being there could not but realise the enormous amount of work that Colonel Simpson and Mrs. Simpson and all their friends in Maidenhead and elsewhere must have put in, and I am quite sure, whatever the monetary return of an effort like that may be, Colonel Simpson and his good wife will have a good deal of satisfaction in knowing how much those of 'us who were there appreciated it, and how much we enjoyed ourselves. (Hear, hear.)

Then there is Mr. Mark Tailby, an old member of the profession who has signified the seventieth anniversary of his graduation by sending £100 to the Fund. (Applause.) I wish many hundreds more who reach their seventieth anniversary would do the same.

There is also Mr. Arnold Spicer, whom we have to thank. He told me beforehand I was not to say anything about this, but I know you will ask me to tender your thanks to him. (Applause.)

I do not think there is anything more to say except to comment on the growing and continuous need for additional efforts on our part. The depression throughout the country which has affected everybody and everything has not left our profession untouched, and we have probably just now as many really sad cases as ever we had in the history of this Fund. Some of them are really too trying. At any rate, I feel sure that I can rely upon you all to do everything you can by personal effort and by example in raising money for the work which we have so much at heart.

I move the reception and adoption of the Annual Report and Statement of Accounts.

Colonel Young: I beg to second that.

The President: Gentlemen, it has been duly moved and seconded, and the Report and Statement of Accounts are now open for discussion. If there is no discussion, I will put the motion to the meeting.

The Motion was carried.

Election of Ten Members of the Association to Serve on the Council.

The Secretary: Gentlemen, the present representative members of the Fund serving on the Council are: Mr. Leeds Gooch, Mr. Kelland, Mr. Locke, General Sir John Moore, Mr. H. Sumner, Mr. Willett, Mr. Woods, Professor Wooldridge, Mr. Dunlop Young and Mr. W. Jackson Young.

The President: Gentlemen, the suggestions put forward, which by no means are to be taken as directions, are that each of these members be re-elected, but that we ask Captain Wragg to serve in the place of Mr. Kelland who has not the time to be present, and that Professor Buxton be asked to take the place of our old friend Henry Sumner. Those are merely suggestions put forward. I am prepared to accept any amendment or addition.

Mr. Coleman: I move the election of these gentlemen.

Mr. Locke: I beg to second.

The motion was carried.

Other General Business.

Colonel Simpson: Gentlemen, I rather wanted to get the opinion of the meeting to see if we could carry forward another scheme to get more money. I do not wish to detain you now, but I will read out a resolution as I have roughly drafted it. The resolution is as follows:—

> "That this General Meeting of the Victoria Veterinary Benevolent Fund is in favour of the establishment of a Ladies' Guild, to be known as the Ladies Veterinary Benevolent Guild, the object of which will be to raise monies for the Victoria Veterinary Benevolent Fund and no other purpose."

I suggest that the Ladies Veterinary Benevolent Guild shall, when formed, submit to the Council of the Victoria Veterinary Benevolent Fund the proposed rules governing the Guild, together with a list of its members, and if these are approved by them they will consider the affiliation of the Guild under Section 9, paragraph 3, of their Memorandum of Association. In that Memorandum of Association it is permissible for this Fund to arrange for "the establishment and maintenance of Guilds or of district, branch or sectional Societies, or local and other Associations, for the promotion, assistance or better conduct of all or any of the objects of the Association.

We are quite entitled to form a Guild of our own, but for certain reasons I did not particularly want us to do that, on account of the membership subscription. The membership subscription in this Fund is limited to 10s. 6d., and some ladies might hesitate to subscribe 10s. 6d., or if they did subscribe 10s. 6d. they might think they had done enough. My object would be that when this Guild

was established, it might be quite a small one to start with, but it would get in touch with the local Divisions and the National, and branches of the Guild might be run, perhaps with the help of the Divisions and the National, so that they would do a little bit of work for the Fund. If we had, say, 20 or 30 branches throughout the country working to get together £5 or £10 in each branch each year, it would at any rate make a welcome contribution. With regard to affiliation, we are empowered to affiliate or co-operate with any other Association or Society.

I move this resolution in order more or less to test the feeling of the meeting, and in order that, if it is acquiesced in, I might have a chance at the National Conference at Norwich of meeting there a good many ladies of the profession and trying to get the thing started. If I feel I have the backing of this Fund I should go forward with even greater heart.

I think in trying to establish a thing such as this amongst the ladies we can point out to them that, after all, approximately 85 per cent. of the cases that we have to help are ladies, and if we point that out I think we should get a little enthusiasm amongst them and thus increase our Fund. We know, of course, that the ladies of the Northern Division are doing it annually, and we are very grateful indeed to them for their efforts. It is on those lines that I want to try to start this thing going. The resolution does not permit this Fund in any way to spend money or do anything, but merely puts perhaps a pious blessing on the scheme. If I have the backing I look for I will try to get this plan carried out.

Mr. McIntosh: I should like to support the suggestion put forward by Colonel Simpson. I think a scheme of this kind would give the lady members, and our wives and daughters, a deeper interest in the work which properly belongs to this Fund. Those of us on the Council know how much it is needed, and any stimulus which can be given to it would be very welcome indeed. This idea put forward by Colonel Simpson will, I think, add a stimulus to the work, and it will probably result in bringing in a considerable amount more to the Fund. I support the resolution most heartily.

The President: When the Honorary Secretary wrote to me, you can easily imagine that I said I supported him whole-heartedly. I will support anybody who will try and find some other means of income for this Fund of ours, but I think it is right that it should be done in the manner Colonel Simpson suggests. At the end of his speech he pointed out one of the chief reasons for the idea which he has put forward, *viz.*, that 80 per cent.—in fact, I think it is correct to say something more like 90 per cent.—of the recipients of grants, small as they may be, are unfortunately women who are either the widows or the daughters or relations of deceased veterinary surgeons. If we can do anything to stimulate further their interest in the two sides of the work: (1) the outlook that they should have for the future and (2) their active co-operation in carrying out the work, I feel sure that the Fund will gain much in the long run, and I am confident that you will all support Colonel Simpson. May I put it to you all that you will? Are there any against?

The Resolution was carried unanimously.

The President: Colonel Simpson, you have the unanimous support of the meeting.

Colonel Simpson: Thank you very much indeed, gentlemen.

The President: Gentlemen, nothing remains to be done except that before we leave I would like just to tell you how much I appreciate the assistance of all the officers. My work is really a sinecure. I have very little to do except sign cheques. The work is usually done for me, and I was going to say that I only sit here as a sort of figurehead. The work is done by Dr. Bullock and his able assistant on his right (Mr. Francis), and by Colonel Simpson and Mr. Arnold Spicer, and I would like personally to pay a very sincere tribute to the very excellent work which they have done. (Applause.)

Clinical and Case Reports.

A Foreign Body in the Thoracic Portion of the Œsophagus.*

BY
G. B. Schnelle.

The subject was a black mongrel dog weighing about twenty pounds. The history revealed that, following a meal given three days previously, the dog had exhibited symptoms of distress and could retain no solids but could take liquids in small amounts.

When the patient was presented in the clinic I offered it a small amount of meat which was eaten with relish. In a few seconds he started making convulsive choking movements (not retching) which continued for about a minute. He then returned the meat to the table and seemed to feel better.

A radiograph revealed a bone and accumulated debris in the thoracic portion of the œsophagus, close to the entrance to the stomach.

The dog was anæsthetised and placed under the fluoroscope and the bone removed with a "radio forceps." After the mass was dislodged, no resistance was felt on drawing it out.

Liquid and semi-solid foods were allowed for three days and an uneventful recovery followed.

The radiograph showed quite clearly the distended, gaseous stomach that is seen when the œsophagus is occluded. This is of diagnostic importance, as foreign bodies in the thorax are often difficult to locate with the X-ray, due to the respiratory movements of the ribs.

Every small animal practitioner is a bit sceptical when his client presents a dog with "a bone in his throat," but there is no better test than the "meat test" which was given this fellow, provided your patient is kind enough to eat the proferred meal.

The "radio forceps" is an instrument designed for removing objects from the œsophagus. It is similar to the bronchoscope with grasping forceps, except that the tube is flexible.

* Reprinted from the *North American Veterinarian*, May, 1931.

Ovaro-Hysterectomy of a Kitten under "Avertin."*

By N. Iorns, Royal Veterinary College, London.

The subject, a blue Persian kitten, 4 months old, was submitted for operation on September 15th, and an attempt was made to anæsthetise it with "Avertin." The weight of the kitten was ascertained to be 4 lbs., and 11 minims of "Avertin," *plus* 2 minims for testing, were added to 5 grams of distilled water, *plus* 5 c.c. for testing, at 40 degrees C., and introduced into the colon by means of a flexible catheter, as advised by Professor Wright in the *Veterinary Journal* for July, 1930. The attempt to induce anæsthesia by this method was a complete failure, due, no doubt, to faulty technique, as the drug used was found to be imperfectly mixed with the water, and some of it was later seen to be adherent to the test tube in which it had been mixed. A slight degree of narcosis was observable 12 hours after the administration of the drug, but it was not considered sufficient for the performance of the operation. Three days later the same dose of "Avertin," but this time mixed with great care, was again administered. Ten minutes later the animal was narcotised, but as the stage of anæsthesia was never reached, chloroform was administered by a bellows apparatus without any restraint.

The operation was then performed through an incision in the left flank, skin, subcutaneous fat, abdominal muscle, and peritoneum being divided and held apart by a "spreader." Immediately the abdomen was opened the left ovary came in sight. This was secured by means of a pair of Spencer-Wells forceps clamped on the left horn of the uterus; a blunt hook was then passed along the left horn until the bifurcation was reached, turned round and passed along the right horn of the uterus, until the right ovary was brought into view. This was likewise secured by artery forceps, and the blunt hook passed along the body of the uterus, which was elevated and brought into view. The body was then clamped, ligated and severed just posterior to the bifurcation, the ovaries removed by torsion, and the wound closed by two rows of interrupted sutures of No. 6 plaited silk. The skin wound was painted with tincture of iodine, and the case made an uninterrupted recovery.

* Case in series submitted for award under the N.V.M.A. Clinical Prize Scheme for Students, 1930.

Influence of Soap on Antiseptics.

It was found that the bactericidal power of mercuric chloride against staphylococci at 37 degrees C. was definitely increased by the addition of 1 per cent. or more of soap. Mercuric bromide and nitrate had their germicidal activity increased, but only against this organism. The disinfectant action of mercuric cyanide and *o*-chlor-mercuric phenol was increased three or four times without any special selective effect for *Staphylococcus aureus*.—B. Hampil (*Amer. Journ. Hygiene*, March, 1931, 623, through *B.M.J.E.*, 3671, 1931, 94.—Ex. *Pharm. Jour.*).

Abstracts.

[**Anæmia in Suckling Pigs.** Schofield, F. W., *Rept. Ontario Vet. Coll.* 1930. p. 57.]

A description is given of a disease of suckling pigs which is characterised by a sudden and severe hæmoglobinæmia. It develops during the first two weeks of life and is frequently fatal, although a small percentage of the animals which survive until the fifth or sixth weeks make a spontaneous recovery. The disease, which does not appear to be infectious, is more common amongst housed pigs and is intimately associated on the one hand with indoor life, and on the other hand with an iron deficiency: sunshine and ultra violet light seem to play but little part in its prevention.

Attempts were made, by modifying the diet of pregnant sows, to prevent the onset of the anæmia in the offspring, but the addition of ordinary minerals such as iron, copper, manganese to the ration of the mother were uniformly incapable of affording the slightest protection.

The early administration of iron salts to the young pigs, however, seemed to be followed by very beneficial results. In order to be really effective, it was essential to commence treatment from the 24th hour after birth before severe damage to the organs and tissues had been produced.

R. E. G.

[**Urinary Calculi in Sheep.** Pontius, B. E., Carr, R. H., Doyle, L. P. *Jnl. Agric. Research.* 1931. 42. 433.]

In order to obtain data on the prevalence of urinary calculi in sheep, the authors sent a questionnaire to breeders in U.S.A. and parts of Canada.

Reports were received in 230 cases covering a period of from two to 15 years. The replies indicated that twice as many calculi occurred where roots were not fed, and several instances were mentioned in which the continued feeding of roots to rams for many months did not lead to calculus formation. It was asserted that the disease was more prevalent in winter months when considerable amounts of grain were being fed.

Experiments were formulated to show the effects of certain types of foodstuff on the reaction and composition of the urine. When roots were given, the sheep voided about 2,500 c.c. of urine in 24 hours, whereas with dry feed the average production was only about 250 c.c. In sheep fed on alfalfa or beet rations, the urine was distinctly alkaline, but the addition of cereal grain or bran brought the reaction nearly to neutral point.

When silage was fed with corn and oats, the urine ash was nearly neutral. When clover hay was fed with silage and grain, the urine ash was more alkaline. Mangels had an effect opposite to that of silage, *i.e.*, the urine ash became strongly alkaline. The reaction of the urine was further affected by the rate at which urease enzymes converted urea to ammonium salts.

The authors formulate the hypothesis that when the ration is lacking in succulence and is composed of feeds which are capable of producing insoluble mineral compounds, the urine becomes concentrated, and retention is likely to occur. This condition allows urease sufficient

time to form ammonium salts, and is conducive to the production of crystals which may become sufficiently large to block the urinary tract.

R. E. G.

[**The Toxic Goitres.** Ball, F., and Rigollot, R., *Revue Vét. et Journ. de Méd. Vét.*, lxxxiii, 1931, April. pp. 205.]

The subject of toxic goitres receives scant attention in *veterinary* literature. Basedow's disease (exophthalmic goitre) only has been reported in animals, but no references exist to the condition known to the Americans as toxic adenoma. In this article the two conditions are carefully compared; many references are given and the hypothesis as to the similarity of the above conditions is illustrated by some excellent plates.

Basedow's Disease.

Basedow's disease is characterised by four cardinal symptoms, *viz.*, goitre, tachycardia, exophthalmia and tremor. These may develop as an acute illness, the heart symptoms or the goitre preceding the others. Tachycardia is paroxysmal and generally the predominating symptom, *e.g.*, Auger reports the case of a dog in which the pulse rate was from 118 to 120 instead of 80. In man the pulse may vary from 100 to 170 instead of 72, and is increased by exercise and decreased by rest.

In " pure " Basedow's disease the goitre is diffuse, little enlarged, regular in outline and without nodules. It may be difficult to " spot " clinically but the histological picture is characteristic. The two lobes of the thyroid are usually symmetrically enlarged though sometimes one lobe only is hypertrophied. The enlargement progresses spasmodically. The gland is highly vascular and soft, and vesicular sounds may be heard on auscultation. Exophthalmia is inconstant, slow in making its appearance and develops after the heart symptoms. The eyeballs begin to project and the gaze fixes. Tremor is easily discernible. Dyspnœa may occur and polyuria with glycosuria or albuminuria has been reported. Emaciation becomes progressive. Metabolic disturbance is interesting and useful as an indication to proper treatment. In all goitres the rate of metabolism is high and may be up to 125 per cent. over normal in some cases. Jung and Auger studied this is a dog. Histologically, one sees the variation in shape of the vesicles, the epithelial proliferation, the lumina of the vesicles empty or containing colloidal material with little or no staining properties (dysthyroidia). The authors believe the histological picture to form a characteristic ensemble. Etiology is commented upon, but no one cause is incriminated. Treatment is reviewed from both the medical and surgical standpoints. Iron, arsenic, Lugol's solution are all useful, but surgical treatment is advised in well-developed cases.

Toxic Adenoma.

The term " *Toxic Adenoma* " embraces clinically all cases of pure hyperthyroidism, tachycardia with arterial hypertension, dyspnœa on movement, wasting and progressive elevation of the rate of metabolism. It consists of a nodular goitre which has become " basedowified," *i.e.*, nodular adenomata which have assumed the histological characters of Basedow's disease, becoming toxic by reason of the hyperthyroidism and the increase of the thyroid hormone with dysthyroidia. The toxic adenoma of the Americans does not figure in veterinary literature, though Ball in a lecture in 1930 reported a case in a 13-year-old dog. The condition develops slowly, is a long time quiescent and occurs in adults mainly. Simple goitres which have existed for years without functional disturbance suddenly develop Basedow-like symptoms—tachycardia, nervousness, tremor, wasting and increase in rate of metabolism. Exophthalmia, however, is uncommon and if present is only slight.

According to *Plummer* the condition is a pure hyperthyroidism capable of being reproduced by excess of thyroid hormone, while Basedow's disease is due to the presence of an abnormal hormone—an incompletely iodised thyroid hormone—(Hyperthyroidism with dysthyroidia): the authors consider, however, that there is no essential difference between the American toxic adenoma and Basedow's disease and that they are two clinical varieties of the same condition. The goitre may be small—almost imperceptible. There is no throbbing, as in Basedow's disease, and nothing is heard on auscultation. Tachycardia is the main symptom, though the pulse rate is slower than in exophthalmic goitre and the rate of metabolism is raised. In appearance, the gland itself is diffuse in Basedow's disease but nodular in toxic adenoma. In the former the outline is regular but in the latter irregular, with nodules which can be enucleated. Nevertheless, histologically the two conditions are not separable and this constitutes a strong argument in favour of the author's opinion.

Its seems probable that toxic adenoma is in reality an arrested form of Basedow's disease.

Partial thyroidectomy is advised for treatment of slight cases. In serious cases the rate of metabolism should be lowered by medical means and the tachycardia treated.

The authors conclude by giving a full description of a case of Basedow's disease in a two-year-old Alsatian sheep dog, in which particular attention is paid to the histological appearance of the sectioned glands, the cell proliferation, the irregular outline of the vesicles and the character of the colloidal material in the lumina.

J. K. B.

H.M. Stationery Office Publications.

The undermentioned have been published recently. Copies can be purchased through any bookseller, or directly from H.M. Stationery Office, at the following addresses:—London: Adastral House, Kingsway, W.C.2, and 28, Abingdon Street, S.W.1; Cardiff: 1, St. Andrew's Crescent; Manchester: York Street; Edinburgh: 120, George Street.

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Command Papers:—		
[3876] Colonial Development Advisory Committee. Second Interim Report covering the period March 1st, 1930, to March 31st, 1931	0 6	0 7
Draft Statutory Rules and Orders, 1931:—		
Therapeutic Substances Draft Regulations, dated June 2nd, 1931	0 11	1 0

N.V.M.A. Divisional Report.

Lancashire Division.*

Poultry Diseases Discussed at Manchester.

A General Meeting of this Division was held at the Public Health Laboratories, York Place, Manchester, on Friday, April 24th, 1931, at 2.30 p.m.

The Chair was occupied by the President, J. O. Powley, Esq., M.R.C.V.S., and other members present were:—Messrs. R. C. Locke, S. H. Gaiger, J. H. White, J. Mackintosh, H. D. Heggarty, H. Sumner, Junr., J. Holroyd, E. H. Curbishley, H. S. Caldwell, H. T. Matthews, C. A. McGaughey, A. W. Noel Pillers, W. Woods, E. J. Burndred, T. Wilson, G. C. Marginson, W. Tweed, J. Spruell. *Visitors*: Messrs. A. L. Mullen, H. Davies, W. L. Dwerryhouse, J. S. Garside, G. E. Bruce, Balfour-Jones, O. V. Gunning, and Captain T. M. Doyle.

Apologies for unavoidable absence were received from Messrs. Warwick Fowle, W. G. Burndred, and Colonel Brittlebank.

The minutes of the previous general meeting, having been published in the *Veterinary Record*, were taken as read.

CORRESPONDENCE.

(1) From the General Secretary of the National Veterinary Medical Association enclosing a letter from the Secretary of the R.C.V.S., with regard to members displaying on their notepaper or account forms, letters other than those indicative of the possession of a professional or academic qualification.

It was proposed by Mr. CURBISHLEY and seconded by Mr. HOLROYD, "That this Division approves of the letters and that they be published in the minutes."

COPY.

National Veterinary Medical Association of Great Britain and Ireland.

2, Verulam Buildings,
Gray's Inn,
London, W.C.1.
April 16th, 1931.

Dear Sir,

I have been instructed to send you the enclosed copy of a letter recently received by this Association from the Registrar of the Royal College of Veterinary Surgeons concerning complaints which have reached him to the effect that members of certain divisions of the N.V.M.A. are displaying on their notepaper or account forms letters indicating their membership of the Society, in addition to the letters M.R.C.V.S.

The Council of the Association, who at their meeting on April 7th, fully acquiesced in the terms of Dr. Bullock's letter, feel that they have only to bring this complaint to the notice of the members of divisions for there to be a complete discontinuance of this undesirable practice.

I am therefore to express the hope that you will co-operate with the R.C.V.S., and this Association by calling the attention of all your members to this matter.

Yours faithfully,
(Signed.) F. KNIGHT.
General Secretary.

The Hon. Secretary,
Lancashire Division, N.V.M.A.

Royal College of Veterinary Surgeons,
10, Red Lion Square,
London, W.C.1.
February 9th, 1931.

Dear Mr. Knight,

Complaints have been received during the past few months to the effect that members of certain divisions of the National Veterinary Medical Association are displaying on their notepaper or account forms letters indicating their membership of the Society, in addition to the letters M.R.C.V.S. I am given to understand that the practice is not common, and it has been suggested to me that I should inform you officially of this complaint, in order that, if they think fit, the Council of the National Veterinary Medical Association may communicate with the divisions on the matter.

The Council of this College has on more than one occasion expressed its strong disapproval of the use of any letters which are not evidence of some veterinary or academic qualification. To add after one's name letters which do not represent any special qualification is held to be wrong for two reasons (1) if it is a claim that the letters do imply some veterinary qualification it is untrue; (2) in any case it is of the nature of an advertisement.

I should be glad if you would bring the matter before the appropriate Committee of the Association so that if they think fit they may draw the attention of the various divisions to the undesirability of this practice.

Yours faithfully,
(Signed.) FRED BULLOCK.
Secretary.

F. Knight, Esq.,
Secretary, N.V.M.A.,
2, Verulam Buildings,
Gray's Inn, W.C.1.

(2) From the General Secretary of the National Veterinary Medical Association referring to the resolution regarding the publication of telephone numbers in the Register of Veterinary Surgeons, stating that the Council of the R.C.V.S. had considered the matter and were unable, at the present time, to take action. Arrangements had been made, however, for telephone numbers to be shown in future in the printed List of Members of the N.V.M.A., issued with the Annual Report and Balance Sheet.

(3) From the Secretary of the Yorkshire Veterinary Medical Association stating that, although they had no candidates for the forthcoming election of Council, they were willing to contribute to the expenses incurred in the issue of an election circular.

(4) Letter of resignation from Mr. G. A. Edwards, M.R.C.V.S., late of Ambleside, owing to his having removed from the district. The resignation was accepted with regret and the wish expressed that Mr. Edwards would meet with every success in his new sphere of activities.

Nomination.—Mr. J. T. Taylor, M.R.C.V.S., Winsford, was nominated for membership by Mr. R. C. Locke.

Election of New Member.—On the proposition of Mr. G. H. LOCKE, seconded by Mr. R. C. LOCKE, it was unanimously resolved that Mr. Henry Davies, M.R.C.V.S., Manchester, be elected a member of the Division.

Election of Honorary Associate.—Mr. CURBISHLEY stated he would like to have the honour of seconding the proposition made by Mr. G. H. Locke at the last meeting, that Mr. A. M. Michaelis be elected as Hon. Associate of the Division. Mr. Michaelis had the distinction of being the oldest member of the Division, having been a member for 50 years, thus attaining his Jubilee, and, said Mr. Curbishley, it gave him great pleasure to second the nomination.

* Received for publication June 3rd, 1931.

The proposition was carried unanimously, and it was decided that Mr. Michaelis be specially invited to attend a future meeting in order that the terms of the resolution may be formally conveyed to him.

Adoption of New Rules.

In moving the adoption of the New Rules printed on the circular calling the meeting, Mr. Curbishley said:—

"I think I made it clear at the last meeting of my year of office as President—when we met in Liverpool on January 21st—what were the reasons which led me to attempt to formulate a scheme for the reorganisation of the Council of this Society by way of overcoming the sloth, lack of interest, and coldness which seemed to threaten our existence: and it is only because I feel now that I can rely upon the members present dealing with the question of the proposed New Rule (which is only a small part of the larger scheme), with that dignity, decorum, and *esprit de corps* which should animate the deliberations of a professional body such as this, that in response to the commands of the President, I ask your further consideration of the matter—after a second unanimous recommendation of the Council.

"I shall be as brief as possible, because I have no intention either to labour or to beg the question, feeling that it would be invidious to do so, since it would rob the appointments I ask you to make of any vestige of honour to those who may be asked to accept them.

"It is well known that the practice in other Councils of raising the senior members and most willing workers to the Aldermanic Bench is fraught with the best and happiest results, because it both serves as a mark of appreciation of worth and work and secures to the bodies corporate the benefit of ripe experience and knowledge of affairs, and the sober and balanced judgment of the Elders—as a set-off to the over-anxious and fiery efforts of those who have still to learn the business of government.

It is usually agreed that the general practitioner represents the largest and still most important group in the profession, but if I might disagree for a moment, I would like to give it as my opinion—for what it is worth—that it seems to be the settled policy of the Council of the R.C.V.S. to overlook the claims of practice and the need for a steady supply of young practitioners; there is still any amount of work in the country, and unless it is catered for we may see even in our time a reversion to the conditions of quackery and empiricism which in the last few decades we have done so much to eradicate. Those remarks may serve to remind us that this Society and the profession as a whole have great traditions—the most honourable and proud traditions imaginable—and by them we have to admit that to the great and far reaching efforts of veterinary surgeons, at a time when all were general practitioners, we owe our present recognition by Government and Authorities of all kinds, and the consequent opening up of the large number of whole-time appointments which, for the moment, serve to overshadow the importance and value to the country of the general practitioner.

"Your Council realise fully that the time has come when its reorganisation is overdue, and have met the suggestion with the greatest goodwill and enthusiasm—recognising, as they do, that it is necessary to move in a fiercely progressive and democratic spirit according to the modern manner and method, and that those who know so well "that which has been" desire to give a hearty fraternal "send-off" to those who will both know and help to shape "that which is to be."

"So, Gentlemen, we come to a parting of the ways—a cleavage—between the older and the ultra-modern, and I suggest that, at the point where the new way branches off, it would be a gracious and knightly gesture to erect a memorial—to be a sign and remembrance amongst us, and a tribute to the veterinary workers of the past who, as I have said, made later developments possible.

"History is a continuous force, but that of our own time is too near to be fully understood or realised.

"The Council's recommendation is that a Board of Hon. Councillors, say five, might be elected and so create vacancies on the Council—and at the first election, at least, those who are or have been general practitioners should predominate, so as to form a link between past and present—and if and when these gentlemen become for any reason unable regularly to attend Council meetings, other Hon. Councillors could take their place and they—if it was then felt desirable—could be passed up to become Hon. Associates.

"I confidently believe that this would be in the best interests of the Society, because it is quite certain that for some considerable time now, had it not been for the devotion of a certain few, a *quorum* would frequently not have been available at Council meetings, and I submit that nothing we could do would be too much to mark our appreciation and thankful acknowledgment of those who have virtually kept us going.

"I shall say no more, gentlemen, except that I feel sure that you will say, by your votes in this matter, that you would wish to take a broad view and that you would be unwilling for a moment to allow yourselves to be second in magnanimity, generosity, and professional aplomb to the present Council, who seek only to do that which shall carry the Society more surely and more quickly along the path of progress."

Mr. Noel Pillers seconded the proposal, and it was unanimously resolved that the following New Rules be adopted:—

XVI (*a*)—In the manner prescribed in Rule XVI and subject to the same conditions and privileges (except that they shall remain subscribing members), the Association may elect five Honorary Councillors, who shall be entitled to receive notice of all Council meetings and to attend and vote at same.

XVI (*b*).—Members to be eligible for election as Honorary Councillors must be or must have been office-bearers and have been members of the Association for a period of not less than 15 years.

Nominations of Hon. Councillors.—Following the adoption of the New Rules, Mr. Curbishley proposed, in suitable terms, that the following members be elected Honorary Councillors:—Mr. W. Woods, Mr. G. H. Locke, Mr. F. Hopkin, Mr. J. Holroyd, and Mr. A. W. Noel Pillers.

Obituary.—Mr. Noel Pillers referred to the death of Mr. M. T. Giblin, of Rochdale, and moved that a letter of condolence be sent to his relatives. The meeting agreed to this by standing in silence.

Poultry Diseases.

The President then called upon Captain T. M. Doyle, F.R.C.V.S., D.V.S.M., to give his address on "Poultry Diseases."

Captain Doyle gave an informal address on the following diseases of poultry—bacillary white diarhœa, fowl pox, fowl cholera, coccidiosis, blackhead of turkeys, roup, avian tuberculosis, Newcastle disease, infectious bronchitis, fowl plague—and his address was illustrated by lantern slides.

Discussion.

Professor Gaiger, in opening the discussion, remarked that he had attended the meeting in order to learn something, and he had not come in vain. He thought that Captain Doyle should give a series of addresses, taking each subject mentioned that day in turn and going into each in detail. He agreed with Captain Doyle that there was an enormous field for the practitioner in poultry diseases, and he was pleased that the lecturer had emphasised the way in which practitioners could recognise some of the diseases. He knew of one practitioner in Lancashire who did his own agglutination tests, whilst in his own Laboratory several thousands were carried out last autumn.

There were one or two questions he would like to ask Captain Doyle. How should one differentiate between Newcastle disease and infectious bronchitis, if the latter disease occurred in this country? Was there any *post-mortem* lesion to lead one to suspect an outbreak of infectious bronchitis? With regard to leukæmia, which Captain Doyle had not mentioned, was it prevalent to any extent in this country? In cases of bacillary white darrhœa, how far would one be justified in accepting caseation in the lungs without going any further? He had made cultures from a considerable number of spleen lesions, and they had all yielded the *Bacillus pullorum*. Referring to coccidiosis, Professor Gaiger asked if the condition occurred in chickens. Often on *post-mortem* examination one found no definite lesions, but on examination of the contents of the intestines, just a few coccidia were found. Would one be justified in saying that such chickens had died from coccidiosis? It appeared to him to be a question of the number present, and if large numbers were found, he would have no hesitation in diagnosing coccidiosis. Was bacillary white diarrhœa common in chickens? One got deaths with no other symptom but diarrhœa, and on *post-mortem*, no lesions were found, but the chickens were too young to have coccidiosis. Was it a fact that white diarrhœa killed chickens without any other lesion?

Professor Gaiger asked if Captain Doyle would say a word on aspergillosis. Was it a common disease and at what age were chickens affected?

Mr. O. V. Gunning asked Captain Doyle what paper or book on poultry he would recommend that the veterinary practitioner should read.

Mr. W. Tweed cited an outbreak which affected 1,500 birds and resulted in a loss of 50. The symptoms were slight diarrhœa and the duration about a fortnight. On *post-mortem* examination the liver was found to be enlarged and spotted. There was no thickening of the cæca. He was unable to state what the disease was, but it was a type of entero-hepatitis.

Mr. C. A. McGaughey admired Captain Doyle's modesty in not mentioning that he was the first to recognise Newcastle disease and the fact that it was caused by a separate virus. He would like to ask how Captain Doyle would advise general practitioners, who were not well up in fowl diseases, to set about learning something of them. Many of the conditions had characteristic signs, but to the average person these signs were very similar, and often, on *post-mortem* examination, the lesions were not characteristic. He himself had seen two cases of acute septicæmic disease, and he had been undecided whether the condition was typhoid or whether it was due to *Bacillus pullorum*. Regarding coccidiosis in chicks, what were the usual signs? Recently he had three cases of a peculiar condition in chicks in which they showed convulsions, and several of which had infestation of coccidia in the cæcum. Mr. McGaughey asked Captain Doyle to add a few words on the question of the agglutination test, particularly with regard to the standard of antigen and the temperature employed.

Mr. H. T. Matthews asked if there was not a demand for a post-graduate course on the subject of poultry diseases.

Mr. G. C. Marginson asked if Captain Doyle had any evidence to prove that blackhead and coccidiosis infection was transmitted through the egg. The most prominent lesion of blackhead in the turkey was atrophy of the muscles, but owners kept the birds for breeding purposes. In the case of coccidiosis, he thought infection did occur through the egg, as he knew of instances where chickens had been reared in clean places where there had never previously been any birds, and still the condition developed.

Professor Gaiger remarked on the fact, mentioned by Captain Doyle, that cattle turned out on ground where there was an infection with avian tuberculosis became reactors. He mentioned an instance in which a tubercle-free herd was turned on to such land and all the cattle afterwards reacted to the tuberculin test. He also mentioned fowl paralysis which was, he understood, becoming a very serious condition in Lancashire. Could Captain Doyle tell them the cause and advise them as to how to deal with the disease?

Mr. T. Wilson asked what was the best method to get rid of a bad outbreak of bacillary white diarrhœa on a farm, and how would a practitioner do the blood test? He thought the reason that poultry diseases were not known to the general practitioner was that the fee chargeable in such cases was not worth while.

The Reply.

Captain Doyle, in reply, stated that he had hurried over the various diseases because, so far, the veterinary profession had shown little interest in poultry, but he was pleasantly surprised at the discussion which had taken place. Investigations into poultry diseases had only been carried out in a serious manner since the war. Regarding Professor Gaiger's first question, the one marked difference between Newcastle disease and infectious bronchitis was that in the former there was never any mucus or blood in the trachea; also, the mortality in Newcastle disease was 99 to 100 per cent., whilst in bronchitis it was about

50 per cent. The question of the virus was difficult, because some said they could filter it, whilst others had failed to do so. It was also held by some that birds could be carriers, but if this was so, it was an exception to the usual run of virus diseases. Captain Doyle regretted that he could not answer the question regarding leukæmia. One did occasionally find necrotic foci in the lungs in bacillary white diarrhœa. It was quite common for chicks to die and show no lesion, but one could always isolate the organism.

Regarding aspergillosis in chicks, Captain Doyle was of the opinion that if it did exist, it was extremely rare. Referring to coccidiosis, he said it was always causing difficulties. If he found the parasite in a chick under five weeks of age, he diagnosed coccidiosis. Chicks often died, but sometimes they got over the condition, and a large number of coccidia would not then be found. In reply to Mr. Gunning, Captain Doyle thought the best book in English on the subject was one by Ward and Gallagher published by McMillan and Co. in 1922, and the bulletins issued by the Ministry of Agriculture were also very useful.

With regard to the question of diagnosis by the general practitioner, diseases such as bacillary white diarrhoea, coccidiosis, and avian typhoid could be diagnosed without *post-mortem* examination, but other conditions were more difficult. Concerning the agglutination test, he thought the tube method of examination should be adhered to, and more than one tube should be used. The important point about the test was the titre. Most of the bad results from this test were due to people taking a titre of 100 instead of 50, and so letting the affected birds pass. For contagious abortion 1 in 100 was recommended. Various people had different methods, and at Weybridge 1 in 25 was the titre used. Coccidiosis did not very often cause convulsions, but such symptoms did occur in chicks from battery breeders. He did not think the infection could pass through the egg. In the case of outbreaks of coccidiosis, when the origin had been obscure, it must be remembered that all birds were affected with the disease, and it was possible for the chicks to contract the disease if on the same land as pheasants. Coccidiosis could be eradicated by keeping the birds on wire floors. Investigations into fowl paralysis were at present being conducted, but so far, little was known about the disease. There were many other diseases, to which he had not referred, of more or less importance. Diseases of ducks seemed to be of importance, and recently in some outbreaks, thousands of ducks had been examined, but nothing definite had been isolated. Captain Doyle thought that the taking of blood samples was not the real work of the veterinary practitioner, and poultry farmers took their own samples, but the practitioner could help in giving general advice.

Replying to Mr. Matthews' suggestion, Captain Doyle thought that if the demand was there, the Ministry would be glad to arrange a post-graduate course in poultry diseases.

A vote of thanks to Captain Doyle was moved by Mr. Noel Pillers, seconded by Mr. Woods, and enthusiastically carried.

Captain Doyle replied in suitable terms.

The date of the summer meeting of the Association was raised, when it was decided to leave the matter in the hands of the Council.

A vote of thanks was tendered to the Director and staff of the Public Health Laboratory for the arrangements and facilities in connection with the meeting, and the business was concluded with a vote of thanks to the President.

John Spruell, *Hon. Secretary.*

Destroyed Pedigree Cattle: Claim against Minister Fails.

In the High Court of Justice (King's Bench Division), Mr. Justice Horridge and a special Jury, on June 10, 11 and 12, heard an action in which Mr. Edwin Roy Bligh, cattle breeder, of Goddards Green Farm, Benenden, Kent, claimed from the Minister of Agriculture and Fisheries and Mr. Richard E. Lloyd, an inspector under the Ministry, £1,331 15s., the balance of compensation which the plaintiff stated was due and payable to him under the provisions of the Diseases of Animals Act, 1894, in respect of the slaughter of his pedigree cattle owing to foot-and-mouth disease. Alternatively, the plaintiff claimed against the defendant Lloyd damages for alleged misrepresentation. He said that he did not dispute a low valuation which had been put on his cattle because he believed Mr. Lloyd's statement that only a non-pedigree price would be paid for them.

The defence of the Minister of Agriculture and Fisheries was that the statement of claim disclosed no cause of action and that the plaintiff, having signed the valuation and not having objected in 14 days to the order served on him, was bound by it. Mr. Lloyd admitted, in his defence, that he told the plaintiff that it would be necessary either to slaughter the cattle or to isolate the farm and that the Minister would not cause the cattle to be slaughtered unless the plaintiff agreed to accept the commercial value of the cattle as compensation for their slaughter. Those statements, he said, were true, and he honestly believed them to be true when he made them. He further said that the plaintiff agreed with him that in the event of the cattle being slaughtered he would accept their commercial value.

Mr. H. I. P. Hallett appeared for the plaintiff; the Attorney-General (Sir W. Jowitt, K.C.) and Mr. Hubert Hull for the defendants.

Mr. Hallett, in opening the case, said that in 1924 the plaintiff was the owner of a valuable herd of Friesian cattle, which became infected with foot-and-mouth disease and was destroyed by order of the Minister of Agriculture and Fisheries in February, 1924. Under the Diseases of Animals Act, 1894, the Minister had the power of causing cattle so infected to be slaughtered, but under section 15 (2) of that Act he had to pay the value of the slaughtered animals as compensation to the owner.

The Pedigree and Commercial Values.

According to the plaintiff, the value of his cattle was between £2,325 and £2,750, and the defendants admitted that the beasts were worth more than £1,870 as pedigree cattle, and it was suggested that they might be

valued at £2,000. All that the plaintiff had been paid, however, was £993 5s.—rather less than half the value put on the cattle by the defendants—that being the commercial value of the animals, and the defendants said that the plaintiff was bound by that valuation as he had not formally objected to it within 14 days.

The case against the defendant Lloyd was that he induced the plaintiff to let the valuation go unchallenged, and to sign it, by saying things which the inspector knew to be untrue. Mr. Lloyd visited the plaintiff's farm and inspected the cattle on February 20, 1924, and told Mr. Bligh that if the herd was slaughtered the Minister would not pay pedigree value for them. That was untrue, because about that time another farmer was paid the pedigree value as compensation for the loss of his slaughtered beasts. Mr. Lloyd further said that the only alternative to accepting the commercial value for the animals was their removal for isolation, which meant that the plaintiff would have to bear the cost of isolation and even then lose his cattle. He (the plaintiff) was told by Mr. Lloyd that the Ministry had given up paying pedigree value. Mr. Lloyd told him that he would give him until the following morning to decide what course he would adopt, but that the Ministry was holding a pistol at his (the plaintiff's) head. The Ministry was now stating that the plaintiff had a perfectly free choice. Mr. Frank Winch, who valued the cattle at £993 5s., was told by Mr. Lloyd that he was to disregard the value of the cattle as pedigree stock.

Counsel went on to say that the Ministry was bound to pay the pedigree value of cattle which were slaughtered by its order.

The plaintiff gave evidence in support of his counsel's statement.

In cross-examination by the Attorney-General, Mr. Bligh said that he regarded Mr. Lloyd as over-zealous. He agreed that in the interests of the taxpayer it would be better to isolate infected pedigree cattle than to slaughter them.

In the course of the hearing it was agreed between the parties that the pedigree value of the plaintiff's slaughtered cattle should be £2,162.

Mr. Lloyd, giving evidence for the defence, said that he entered the service of the Ministry in 1915 and had been a member of the Royal College of Veterinary Surgeons since 1916. When he went to the plaintiff's farm he had no written instructions and had no authority to decide what was to be done in the case of the plaintiff's cattle. It was his duty to make a diagnosis whether foot-and-mouth disease existed and let the Ministry know the result of his examination. He would then receive instructions. After he had satisfied himself that there was foot-and-mouth disease he had a conversation with the plaintiff, but could only obtain information with difficulty, as Mr. Bligh kept asking questions about compensation.

Instructions from the Ministry.

The plaintiff asked him whether the Ministry would pay pedigree value, and he replied that he could not speak for the Ministry, but that in the circumstances he personally did not think that it would. The Ministry instructed him by telephone to take no steps towards valuing the cattle, but to treat the case provisionally as one for isolation and to ring up later in the day. Following that he had a long conversation with Mr. Bligh, who told him that he was trying to make up his mind whether he would have the cattle isolated or accept the alternative which the Ministry offered of having the herd slaughtered at its commercial value.

When he telephoned he was told by the Ministry that if the owner preferred slaughter to isolation the Ministry would only slaughter at a commercial valuation. He was directed to continue to treat the case provisionally as one for isolation. He saw the plaintiff, who asked him whether, if he decided to have the cattle isolated, he would change his mind and have them slaughtered at a commercial value. He (the witness) replied that they had already wasted much time, but that if in the morning Mr. Bligh changed his mind and decided to have the cattle slaughtered at a commercial valuation he would telephone to the Ministry, but that the decision must rest with that Department.

Mr. Lloyd denied that he told the plaintiff that the Ministry was holding a pistol at his (Mr. Bligh's) head. The situation was not that at all. In the morning the plaintiff came to him and said that he had changed his mind about isolation, and would have the herd slaughtered at a commercial valuation. He (the witness) thereupon rang up the Ministry, and he was authorized to get the cattle valued and slaughtered. The plaintiff himself suggested Mr. Frank Winch as the valuer. When the witness handed the valuation form to the plaintiff Mr. Bligh read it through and said: "Is this all I am going to get? I cannot accept that." But after some further discussion and a consultation with his wife he signed the document and the cattle were slaughtered on the following day. It did not matter to the witness whether the cattle were isolated or slaughtered or whether the plaintiff received pedigree or commercial value.

In cross-examination, the witness said that he did not think it his duty to deal with the case as cheaply as possible from the point of view of the funds at the disposal of the Ministry.

In answer to further questions by counsel, the witness said that if the Ministry was obliged to slaughter it would have to pay the full value of the animals. He told the plaintiff that he did not think the Ministry would pay pedigree value because there were cases going on where isolation had been adopted instead of slaughter.

Compensation Paid to Farmers.

Sir Ralph Jackson, Chief Veterinary Officer of the Ministry, in giving evidence, said that during 1922-24 the Ministry had paid £5,000,000 in compensation to farmers for cattle which had been slaughtered. There were a number of cases in which pedigree animals had been isolated, and the success of that experiment led

him to the conclusion, on Mr. Lloyd's report, that isolation in the case of the plaintiff's cattle was the practical proposition. Mr. Lloyd had always done his work well and acted sympathetically and conscientiously towards farmers.

The Attorney-General said that the reason of his being present was that a charge of fraud was made against a Civil servant who had had long and honourable service under the Ministry. That allegation having been made, no question of compromise could be considered, and he was going to fight the case to the bitter end. He was surprised at the way in which the charge of fraud was made, having regard to the fact that the plaintiff signed a document after mature consideration agreeing to accept the price offered. He submitted that that charge was not made out, and, further, that it ought never to have been made.

His Lordship having summed up, two questions were left to the jury who, without leaving the box, answered them as follows:—

Did the defendant Lloyd state that the Ministry did not pay pedigree value?—No.

Did he state that the alternative to slaughter was removal for isolation?—No.

His Lordship said that that meant verdict and judgment for Mr. Lloyd, with costs.

Argument against the Minister.

The jury were discharged, and, counsel having agreed that the case against the Minister of Agriculture should be left to his Lordship, Mr. Hallett proceeded to argue that the Minister was bound to pay the plaintiff from the appropriate fund the difference between the commercial value and the pedigree value of the slaughtered cattle. He pointed out that under section 15 (1) of the Diseases of Animals Act, 1894, the Board was given the power to cause animals infected with foot-and-mouth disease to be slaughtered, and that subsection 2 enacted that the full value of the slaughtered animals should be paid as compensation. It had now been agreed that the full value of the animals was £2,162 10s.

The Minister had put forward the defence that by Clause 39 of the Animals (Transit and General) Order, 1912 (Statutory Rules and Orders, 1912, No. 422), it was provided:—

(1) Where under the Act of 1894 or any Order it is necessary that the value of the animal should be ascertained in England or Wales for the purpose of compensation payable by the Board, the value shall, subject to the provision of any such Order, be ascertained as follows:—(i) If within 14 days after the receipt of notice in writing from an inspector or officer of the Board of the valuation of the animal the owner of the animal or his agent does not give a counter-notice in writing stating in effect that he disputes the valuation made on behalf of the Board, the compensation shall be paid on that valuation.

Counsel contended that that was not a defence to the claim that the full value of the animals should be paid by the Minister. Furthermore, there was no power in the Minister to make bargains with a subject when levying taxation without the authority of Parliament. The Government could not make terms as a condition of exercising its powers in a particular way. If it did, it could without statutory authority deprive a subject of half the compensation to which he was entitled.

The Attorney-General said that there was no allegation that money was abstracted or withheld from the plaintiff by duress. It was admitted that Mr. Bligh agreed to accept £993, and it was alleged that he was induced to accept that sum by false statements. That allegation had been disproved and had gone, but the agreement stood. The cattle were slaughtered and £993 was paid. Either that was done under Section 15 of the statute or it was not. If it were, the plaintiff was hopelessly out of time; if it were not, it could not be attacked on the ground that it was not in accord with the statute. Fraud having gone and duress never having been there, there was the agreement and the money had been paid. In any case the plaintiff's claim was quite hopeless.

The statute contemplated that the Minister should exercise his discretion. Here he had provisionally exercised it in favour of isolation. The farmer, who would have had to pay expenses and take the risk of losing the value of his cattle as pedigree stock, was anxious to get something in the present instead of leaving everything to a problematical future. He therefore said: "Let us treat these cattle as being worth £993 and apply the statute on that assumption." The Minister agreed and the money was paid.

Judgment.

His Lordship, in giving judgment, said that the action was brought to recover the difference between the amount of compensation which was paid to the plaintiff in respect of his cattle which were slaughtered and the amount which he said they were worth as pedigree cattle. He sought to recover that in two ways. As against the Minister, he said that the valuation that was made before the slaughter was only made because he (the plaintiff) was induced to consent to it being made by the fraud of the inspector Lloyd. The jury, however, had negatived any case of fraud whatever.

It was also said that the plaintiff was entitled to recover because the valuation was not made in accordance with section 15 of the Diseases of Animals Act, 1894, and that the Ministry had no power to depart from the provisions of that Act by agreement. He (his Lordship) could see no reason for putting any limitation on the valuation. The Ministry and the farmer agreed, in order that the slaughter might take place, that the value should be on a commercial basis. He held that it was a binding valuation under the Act.

There was no allegation of compulsion. The agreement was a voluntary one. The plaintiff certainly got less money, but he got the advantage that he escaped all the expense of isolation which, in the long run, might have cost a great deal more than the difference between the commercial and the pedigree value. The agreement was a perfectly good one.

There would be verdict and judgment for the defendant Lloyd, with costs, and judgment for the Minister of Agriculture, with costs.

"B C G" Vaccine.

Dr. Stanley Griffith's Adverse Report.

It will be remembered that, in consequence of the interest aroused in the medical profession by the possibilities of protecting children, by vaccination, against tuberculosis infection, the Committee upon the Bacteriology of Tuberculosis, appointed by the Medical Research Council, instructed Dr. A. Stanley Griffith to carry out experiments with "B C G" vaccine on monkeys, and the results of these are contained in a report made by him and issued by the Medical Research Council on Thursday of last week.

The tests, as far as Dr. Griffiths was concerned, failed to confer on the monkeys any protection against subsequent tuberculous infection. Dr. Griffith used a culture of a strain of the tubercle bacillus which is known as the Bacillus Calmette-Guèrin.—*The Times.*

Recent statistical returns published by the German Health Office show that of the 2,000 cases of meat poisoning reported in the past three years more than half were due to the consumption of raw meat. This was also the cause of 20 of the 60 deaths.

Forecasts received by the Empire Dairy Council indicate that the present year will prove the greatest dairying year yet experienced. Britain's butter consumption is expected to reach the record figure of 400,000 tons, compared with 372,000 tons last year.

From The Veterinarian,

June, 1831.

Queries Respecting Cattle, etc.

The following Circular has, ere this, reached the majority of our veterinary readers; but lest some should have been unintentionally passed over, we give it insertion in the present Number of our Journal. The queries relate to subjects of the highest moment, whether the interests of the agriculturist or the improvement of our profession are considered. If practitioners in the various parts of the kingdom will contribute the result of their experience in the breeding of cattle and sheep, and the nature, causes, and treatment of their diseases, a mass of information will be accumulated, absolutely invaluable, and, in fact, the foundation will be laid for a truly national work on a subject hitherto neglected, but of vital importance. Mr. Youatt most earnestly solicits the co-operation of his veterinary brethren; and pledges himself, that to every fellow labourer due and public acknowledgment shall be rendered. Breeders of cattle, and agriculturists generally, may render very considerable assistance, and for which the society, and the humble individual who has the honour to be employed by them in arranging this work, will be truly grateful. Two valuable communications are appended: they contain the kind of information which it is desirable to collect.

W. Y.

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Replies to Queries.

By Mr. C. Dickens, Kimbolton.

1.—The Yorkshire cows are by far the most prevalent here.

2.—The only cross we have of any consequence is from the Derby, by which means they get the stock heavier.

3.—The York are generally preferred; for as milkers they find them keep their milk longer, and also get a more ready sale for them in the London mart.

4.—But little used in husbandry.

5.—The diseases they are generally subject to are diarrhœa, dropping after calving, inflammatory fever, red water, and blain; but think the first more frequent than any.

Red water is a disease often produced a few miles from here, generally if the beasts are bought in and put on the woodland land, which would lead us to suppose that it was owing to some strong diuretic quality existing in the herbage. We generally subdue it by bleeding and Epsom salts. But you must indulge me with a little forbearance here, while I relate a story. A few years back there was a gentleman living in this county who was very celebrated for the cure of red-water; and his son, a most respectable farmer, tells me the following was his never-failing recipe; bol. armenian ʒii. a handful of salt, and a quart of strong decoction from the common nettle: of this he made a drink, which he used to sell for 2s. 6d.

Blain is rather an unfrequent disease in this part of the country, but when found is always in marshy lands. There is a peculiar sharp, broad-leaved grass found there, which the farmers think produce it; but I should consider blain rather an effect than a disease.

Inflammatory fever not very frequent; the general causes I have found to be either over-driving, or from having been put into luxurious pasture. Treatment, bleeding and Epsom salts; sometimes using the digitalis.

Dropping after calving.—In this disease I have pursued the following treatment with great success: venesection, if the animal is in a state to bear it; then one drachm of calomel in thick gruel; and after the inflammatory action is over, I administer myrrh in ounce doses, which I prefer to all other tonics in this disease, considering it has a peculiar action on the uterus, giving a tone to the organ, and at the same time, by its antiseptic quality, prevents the putrefactive process from going on. There is another fatality that often proves a subject of great loss and vexation to the grazier, but which, although well deserving our attention, I believe has never been taken up by the professional man; *viz.* that of abortion a short time previous to the appointed time of calving. What is the cause? Does it arise from some vegetable matter acting too strongly on the uterus?—it being a fact that some fields will generally produce it: if this be the case, we require the assistance of our botanical brethen to find out what the plant is, and by that means get rid of the cause. Secondly, it is well-known that if one cow slips, and is turned amongst others, let the situation be where it will, there are generally others follow, as if it was owing to some contagious effluvia issuing from the parts after abortion. The best preventative I have found to be bleeding.

Diarrhœa.—This disease has been very prevalent in this neighbourhood this spring, and I have been tolerably successful in the treatment of it. I at first administered the various astringents, as creta, kino, opium, considering it to be a disease of the exhalent vessels or mucous coat of the intestines; but, much to my disappointment, I found little or no good effect from them, which led me to consider the liver as the organ primarily affected, secreting an unhealthy bile, and thereby producing a disordered action through the whole intestinal canal, as an effort of nature to throw something off offensive to the system. I therefore administered one drahm each of calomel and opium in some good thick gruel, which I consider of the greatest importance, acting as a sheath to the intestines, already under a state of excitement. I repeat this according to the size of the animal, and the violence of disease; but I have rarely had to continue the dose more than twice in the space of three or four days, continuing to give the gruel in the interval. But I ought to state that, if it is of recent date, or as Mr Blaine terms acute, I always bleed; if of long standing, I have omitted bleeding.

Agricultural Research Institutes.

The Reports of the Agricultural Research Institutes, as well as those on agricultural investigations carried out at other centres in the United Kingdom, for the academic year 1929-30 have been collected and published by the Ministry in one document, which is the second of the series, its predecessor (for 1928-29) being the first and obtainable from the Ministry of Agriculture free and post free. There is another publication which has been annual since 1926-27, the information in which is complementary to that given in the present reviewed volume. It is called "Abstracts of Papers on Agricultural Research in the United Kingdom," and is obtainable from the Ministry, price 1s. net, post free.

The Reports are divided under the subjects of the field of agricultural research, and are sub-divided under the name of each Institute occupied in the field. For example, the first subject dealt with is Soils, Plant Nutrition and Plant Physiology, and this is sub-divided into chapters giving the work at (1) Rothamsted Experimental Station; (2) North of Scotland College of Agriculture; (3) Macaulay Institute for Soil Research; (4) Chemical (and Animal Nutrition) Division, Ministry of Agriculture, Northern Ireland; and (5) Research Institute of Plant Physiology, Imperial College of Science and Technology. There are 11 subjects covered altogether and 45 Institutes.

In addition, accounts are given of work under other and more general headings, such as Chemistry, Entomology, Mycology and Botany, Veterinary Science, Dairy Bacteriology, Economics, and Grassland, while particular investigations are reported in a separate section at the end. These, for example, cover the Improved Management of Grassland; Kemp in Fleece of Welsh Mountain Sheep; Spartina Townsendii; and Feeding Value of Molasses Beet Pulp. It is unfortunately impossible within the limits of a short note to give more than this general idea of the interest and importance of the work which has been done at the Agricultural Research Institutes and is briefly reported in this volume.

Notes and News.

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events.

June 30th.—N.V.M.A. Council and Committee Meetings, Grand Hotel, Birmingham.

July 2nd.—R.C.V.S. Annual Dinner.

July 2nd.—Meeting of the Southern Counties Division, N.V.M.A., at Southampton.

July 6th.—Meeting of the Editorial Committee, N.V.M.A., 2 Verulam Buildings, Gray's Inn, at 4.30 p.m.

July 9th.—Meeting of the Eastern Counties, Division, N.V.M.A., at Cambridge.

Aug. 22nd-28th.—N.V.M.A. Congress at Norwich.

Personal.

The President of the Association (Lieut.-Colonel P. J. Simpson), Mr. G. P. Male, Mr. W. D. Rees and Mr. J. Willett, were the guests of the South Wales Colliery Owners' Association at a luncheon at Olympia on Saturday last, June 18th.

The party afterwards inspected the 60 pit ponies which have aroused so much interest at this year's International Horse Show, and later witnessed the afternoon performance of the Show.

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R.S.P.C.A. v. Bridgwater Veterinary Surgeon.

Intense interest was taken in a case at Bridgwater when a well-known local veterinary surgeon was charged with causing unnecessary suffering to a dog by failing to give it proper care and attention after an injury. The prosecution was brought by the Royal Society for the Prevention of Cruelty to Animals against William Morgan Scott, F.R.C.V.S.

Evidence for the prosecution was given by Mrs. Sutherland Clift, the owner of the dog, Patrick Meara, an inspector of the R.S.P.C.A., Mr. Harry Potts, M.R.C.V.S., Mr. R. Morford M.R.C.V.S., and Colonel D. L. Lake, M.R.C.V.S.

Mr. W. M. Scott, M.R.C.V.S., the defendant, and amongst others, Professor Tom Hare, M.R.C.V.S., Professor J. McCunn, M.R.C.V.S., Professor F. T. G. Hobday, F.R.C.V.S., and Mr. K. Lean, Borough Sanitary Inspector gave evidence for the defence.

After a short retirement, the Chairman of the Bench gave the decision as follows: "The Bench have given this matter very careful consideration and regard the officials of the Society as fully justified in bringing the charge. On the whole of the evidence there is not sufficient ground for a conviction. The case will therefore be dismissed."

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Major Dunkin's Welcome in the States.—In the course of an enthusiastic reference to the visit to the United States of Major G. W. Dunkin, M.R.C.V.S., D.V.H. (Veterinary Superintendent of the Field Laboratories of the National Institute for Medical Research, Mill Hill), the June number of the *Journal of the American Veterinary Medical Association* says that when Major Dunkin landed in New York City he was met by a committee representing the Veterinary Medical Association of the City, consisting of Dr. Adolph Eichhorn, Dr. Robert S. MacKellar and Dr. E. R. Blamey. Major Dunkin was the guest of honour at a special meeting of the Veterinary Medical Association of New York City, held at the Academy of Medicine on Thursday evening, May 14th.

R.C.V.S. Obituary.

Eady, Leonard Frank, Little Peter Street, Knott Hill, Manchester. Graduated London, December 22nd, 1910. Died June 13th, 1931, aged 42 years.

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Keal, Robert John, Burnham Road, Epworth, Lincs. Graduated Edinburgh, November 22nd, 1879. Died June 19th, 1931, aged 84 years.

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Death of Mr. Harry L. Leach, M.R.C.V.S.

"Mr. Lionel Harry Leach, of Glenthorn, Tawney Street, Boston, passed away on June 11th," says the *Lincoln Mercury*.

"Aged 47, deceased was the son of Mr. L. L. Leach, M.R.C.V.S., of Pen Street, Boston. A native of Boston, and educated at Kirton Grammar School, he was possessed of considerable skill as a veterinary surgeon. In July, 1910, he secured his diploma, and he had been closely associated with his father's extensive practice.

"During the war he served as a lieutenant in the R.A.V.C., and had since held many official appointments on behalf of the Ministry of Agriculture. He was veterinary inspector to the Ministry for the locality; inspector for the Parts of Holland under the Contagious Diseases of Animals Act; and was also Market Inspector for Boston.

"In late years he had suffered considerably, but with indomitable pluck carried on his practice, and was esteemed for his invariably courteous and genial bearing.

"Both as a veterinary surgeon and in private life Mr. Leach was held in the highest regard, and the locality is the poorer by his lamented death.

"He leaves a widow and two sons, to whom the greatest sympathy is extended."

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The late Mr. Alexander Crabb, C.M.G.

In reference to the death of Mr. Alexander Crabb, which was reported in our last issue, *The Times*, of June 16th, says: "Mr. Crabb was born 58 years ago in Glasgow and studied for the veterinary profession. Having obtained the degree of M.R.C.V.S. in 1894 he went into private practice. In 1899 he obtained a position as veterinary officer in the New Zealand Government service. This position he relinquished in 1906 and returned to England, where he again set up in private practice. In 1908 he was appointed veterinary officer in London to the New Zealand Government. He qualified for the Fellowship of the Royal College of Veterinary Surgeons in 1913. In 1917 he was promoted to the position of Trade and Produce Officer, and in 1923 he was appointed Secretary to the Department. In recognition of his services, Mr. Crabb was made C.M.G. early this year."

Mr. Crabb was a very capable official, popular with all visitors to the High Commissioner's office, always willing to assist anyone in trouble, and "personæ gratia" in Smithfield Markets, where for many years he looked after interests of New Zealand producers and the Department of Agriculture.

The meat inspection staff of the City regarded him as one of themselves and they paid their last respects to him by sending a beautiful wreath to be placed on his grave. The burial took place in West Norwood Cemetery on Wednesday, 17th, where a large number of friends attended, including Sir T. Wilfrid, K.C., High Commissioner, Mr. Hal Williams, Captain Heywood, representing the Australian High Commissioner, representatives of the New Zealand Meat Producers' Board, Modern Meat Marketing and Cold Storage, and Colonel Dunlop Young, who represented not only the meat inspection department but also the Royal College of Veterinary Surgeons and the National Veterinary Medical Association. Many beautiful wreaths were sent by friends. Mr. Crabb leaves a widow, one son, who is in the Government Service in New Zealand, and one daughter, and to these we offer our deepest sympathy.

Diploma of Veterinary State Medicine.

At the examination held in Edinburgh for the Diploma of Veterinary State Medicine on June 16th, 1931, the following candidates were declared successful:—

Francis Alexander Gordon; Daniel Francis McCarthy; John Reid; William Graves Robinson.

Reminder: Don't forget your tickets for the R.C.V.S. Annual Dinner, Hotel Victoria, July 2nd. (Tickets 15s. each).

In view of the distinguished guests who are expected it is hoped that a large number of members will make a point of being present to support the President.

Apply at once, with remittance, to Secretary, 10 Red Lion Square, W.C.1.

Eleventh International Veterinary Congress.

Members of the Eleventh International Veterinary Congress, held in London last August, will have received from the Secretary Volumes II and III of the Proceedings. These Volumes, which run to 397 and 926 pages respectively, contain all the papers presented to the Congress. It is hoped shortly to issue the report of the discussions at the various meetings, which will form part of Volume I; the remainder of the Volume containing the lists of Delegates and Members, the rules of the Congress, and the Resolutions passed at the closing meeting. The work of preparing the material for this Volume has been very heavy, but we are happy to announce that it is now nearly completed.

Correspondence.

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

All correspondence must bear the name and address of the contributor for publication.

The Editor does not hold himself responsible for the opinions of his correspondents.

Veterinary Meat Inspection.

To the Editor of The Veterinary Record.

Sir,—I have read with great interest your leading article in to-day's issue of the *Record* regarding meat inspection, but I fail to see any justification for the optimistic note with which you conclude your remarks.

You seem to ignore entirely the fact that meat inspection in Great Britain, except for a mere handful of veterinarians, is carried out by laymen, working under medical men rather than animal pathologists. In no other civilised country in the world to-day except here is a learned profession deprived by law of the right to perform some of its natural functions. Animal health in other countries is controlled by men properly trained for the job—veterinary surgeons—and the store of knowledge, statistical and pathological, derived from the *ante-* and *post-mortem* examination of animals in meat inspection can thus be utilised for the eradication of disease.

What is the position in Great Britain? Here there is no national system of meat inspection whatsoever. Local Authorities, by sanction of the Ministry of Health, are to deal with meat inspection in their areas. Apart from a few large cities, this means that the local Medical Officer of Health is responsible for the job, and he in turn passes the work on to that useful public servant, the sanitary inspector. What of the store of knowledge available to the veterinary professions in other countries from the performance by their members of meat inspection? Is that available to the British veterinary profession? Obviously it is not. Pathology, Bacteriology, Parasitology and the study of statistics are just a few of the sciences that can be enriched by meat inspectors who are properly trained for their job, but under existing conditions what chance is there for the majority of British veterinarians to add to their knowledge in this way?

The control of animal diseases should be under one Government department. The Ministry of Agriculture can employ veterinary surgeons to deal with scheduled diseases, but not for meat inspection. The Ministry of Health supervises meat inspection, but has no power to employ a single veterinary surgeon!

In other countries the control of animal disease is vested in the department of agriculture who employ veterinarians for the work, both meat inspection and disease eradication, thus it is possible for them to co-ordinate the work and utilise their information for the benefit of the country as a whole. What a contrast from Great Britain, with its Ministry of Health run by medical men endeavouring to deal with the inspection of animal flesh, its Ministry of Agriculture with its veterinary department allowed only to deal with certain particular diseases, being forbidden to touch meat inspection, and the general practitioner strictly barred from entering the local abattoir to enrich his knowledge of pathology!

Is it any wonder that in November last the Canadian Government totally prohibited the importation into Canada of meat food products from Great Britain owing to lack of a proper national system of meat inspection here? The Canadian Government considers the present system of food inspection in this country as being quite unsatisfactory and not meeting the food law requirements of the Dominion.

The problem as it affects British bacon factories is even worse. There are only about three or four whole-time veterinary surgeons employed here altogether, and they owe their posts to the fact that the firms have an export trade. Foreign governments insist upon the health certificates accompanying the goods being signed by veterinarians. These veterinary surgeons have to thank foreign governments for keeping them at their posts. Were it not for that fact there is no doubt that since 1925 sanitary inspectors would be performing their work as regards meat inspection, and a few more posts would have been closed to the veterinary profession.

It seems to me impossible to expect much progress in meat inspection here so long as it is divorced from the Ministry of Agriculture's veterinary department. The control of animal disease ought to be vested in the one department, not scattered over various authorities as at present—Ministry of Agriculture, Ministry of Health, Local Authorities, County Veterinary Officers, City Veterinary Officers, University Advisers, and General Practitioners, all working independently, and in the end getting nowhere. I mention the Ministry of Agriculture's Veterinary Department, as they are obviously the people to control meat inspection, and not medical officers, however competent. The argument used against handing meat inspection over to a Veterinary Department in this country is that as meat is destined for human food, its proper supervisors are the medical officers, the guardians of public health rather than those of animal health. The answer to that is that meat is the flesh of animals, and the only people trained to distinguish diseases affecting such flesh are veterinary surgeons, and not doctors of human medicine. Meat inspection in all other civilised countries is already in the hands of veterinary surgeons, and such countries are by no means less healthy for human beings to live in. On the contrary, experts have pronounced their systems of meat inspection and method of control of animal welfare to be far ahead of ours.

You state in your article that no one can say we are not making progress: in view of the foregoing I fail to see how you, Sir, can justify that view. It is true the Irish Free State and Northern Ireland Governments are forging ahead of us in this respect, but then they have young men at the head of affairs.

Yours obediently,

D. J. Anthony.

Veterinary Department,
Marsh and Baxter, Ltd.,
Brierley Hill, Staffs.
June 20th, 1931.